POLYNESIANS
EXPLORERS of the PACIFIC

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Fig. 1.—The South Pacific Ocean, showing routes by which the Polynesian triangle was probably originally explored and settled.
Fig.
The Polynesians, who were the first human inhabitants of the far-flung mid-Pacific islands, were the most daring deep-sea voyagers and explorers the world has ever known. In the double-hulled ships they fashioned with stone tools they sailed by stages across the widest part of the unknown Pacific, from southeastern Asia probably all the way to the coast of Peru. They did this centuries before Columbus ventured into the Atlantic, even before those great mariners, the Vikings, found their way by comparatively short island-to-island voyages across the north Atlantic to the New World. And the Polynesians found and populated every habitable island in the vast expanse between Hawaii on the north, New Zealand on the south, Easter Island on the east, and Tonga and Samoa on the west. What is more, they succeeded in bringing their domestic animals and their vegetable foods, some of which could be transported only as delicate young plants, to the isolated dots of land they found so widely scattered in the great reaches of this ocean world.

These facts show, beyond doubt, that we must credit the Polynesians with purposeful exploration and settlement of the Pacific Islands. If, as has sometimes been alleged, their long voyages had been accidental—a boat-load of fishermen now and again blown before a storm—the castaways would not have had with them the women to propagate the race, for women did not participate in deep-sea fishing. Neither would they have had the food plants and animals which they had spread throughout the islands when the Europeans first encountered them. It is doubtless true that new islands were occasionally discovered by castaways who made their way back home and later returned to settle. Polynesian legendary history gives us some such accounts. But that same history tells us of brave mariners who built exploring ships, stocked them like Polynesian arks and set out in search of new homes upon the wide ocean. Their sea chants suggest the spirit of these dauntless sailors. Here is one:
The handle of my steering paddle thrills to action,
My paddle named Kautu-ki-te-rangi.
It guides to the horizon but dimly discerned.
To the horizon that lifts before us,
To the horizon that ever recedes,
To the horizon that ever draws near,
To the horizon that causes doubt,
To the horizon that instills dread,
The horizon with unknown power,
The horizon not hitherto pierced.
The lowering skies above,
The raging seas below,
Oppose the untraced path
Our ship must go.

The area discovered and populated by these seafarers is known as the
Polynesian triangle. (See frontispiece map.) The word Polynesia means
"many islands." The triangle of many islands has the Hawaiian group as
its northern apex, Easter Island (Rapa Nui) at its eastern angle and New
Zealand at the southwesternmost point. It is a nearly equilateral triangle
averaging close to 4,500 miles to the side and enclosing an area nearly three
times as big as the United States. But it is mostly open rolling ocean; the
total area of all the several hundred Polynesian islands combined is an
infinitesimal part of the vast area within the triangle. Including New
Zealand the total land area of all Polynesian islands is about equal in size
to the State of Arizona; without New Zealand it is only a little bigger than
Vermont. The major groups of Polynesian islands that were populated
when the Europeans encountered them are the Hawaiian group, the Society
Islands including Tahiti, the Tuamotu coral atolls just north and extending
east of the Societies, the Marquesas northeast of the Tuamotu, the Australs
southeast of Tahiti, the Cook Islands (formerly called the Hervey group)
southwest of Tahiti, Tonga west of the Cook Islands, Samoa north of
Tonga, and the huge twin islands of New Zealand south and west of Tonga
Lonely Easter Island was also inhabited, but Pitcairn, made famous by
the *Bounty* mutineers, southeast of the Tuamotu group, the Phoenix Islands,
north of Samoa, and the Line or Equatorial Islands between Tahiti and
Hawaii were all deserted when the first Europeans came, although many
showed unmistakable signs that Polynesian peoples had lived on them at
some time in the past. Tiny Midway, which is at the northwestern tip
of the Hawaiian chain, and Wake, really west of the Polynesian area,
were never permanently inhabited until their modern use as seaplane bases.
THE ANCIENT HOMELAND

Where did the Polynesians come from? This question has intrigued everyone who has come to know them or to know about their feats of exploration. The Polynesians had no written history to give us ready-made answers, but there are several other lines of evidence which anthropologists are in the midst of untangling and weighing. The broad facts have been pretty well worked out, though many of the details are still missing and some of them are probably forever lost in the past.

Although the Polynesian people did not have a written language by which to record the deeds of their past, they did have an amazingly extensive oral history composed of legends, myths, and genealogical recitations. These are not all equally reliable or valuable as historical sources, and it is often extremely difficult to evaluate a particular account. The most accurate historical records of pre-European Polynesia are undoubtedly contained in the genealogical records of the family lines of some of the high chiefs. All Polynesians are very proud of their descent from the great ancestors, and even the lowliest individual can trace his genealogy back for many generations. The high chiefs, who had the most illustrious ancestry, traced their family lines back to the very gods who created the world. These accounts not only gave the names of ancestors but also recounted the great deeds each had performed and thus constituted a word-of-mouth history. They were recited at important ceremonial occasions by men who had been carefully schooled in the accounts. This schooling, plus public and religious pressure (some Polynesians believed that a man who made a mistake in an important recitation would die through the wrath of the gods), preserved considerable accuracy in these feats of memory. Their accuracy can be checked in several cases. For example, the Maori of New Zealand have a legend that a Tahitian chief named Kupe discovered New Zealand some 40 generations before the Europeans came and that several other chiefs, whose names are still known, later sailed together in a fleet of canoes from Rarotonga and Tahiti to colonize New Zealand. Several generations later, say the oral traditions, the Maori stopped building deep-sea canoes and no longer went to visit their Rarotongan and Tahitian relatives. The order of events described in this account was checked by comparing it with the genealogical stories of Rarotonga and Tahiti which had been preserved in isolation from the Maori account for several generations before the coming of the Europeans. All three legends were found to be in general agreement, and most anthropologists now accept the account as factual history. Unfortunately, we cannot estimate accurately
the actual dates of these events, but they must have occurred several hundred years before the Europeans arrived in Polynesia.

Similar genealogical accounts preserved on other island groups within Polynesia help us to understand the order of discovery and settlement of many of them, and most such genealogies show that Tahiti and the Society Islands were the great center of dispersion of people into most of the rest of Polynesia, including far-flung Hawaii and Easter Island. But these accounts do not go farther back, do not tell us where the early Tahitians came from or how they got to central Polynesia. There are other legends, however, that have been interpreted by some students of Polynesian history as surviving accounts of a time in the far-distant past when the forebears of the Polynesians lived on the Asiatic mainland. All such interpretations rest on very shaky ground. For instance, a Maori legend refers to a time when the Maori lived in the Land of Uru, and this has been taken to mean that they once lived in Ur of the Chaldees in Mesopotamia. But Uru only means west in the Maori dialect of the Polynesian language. There is also a tradition that the forebears once lived in Irihia; it has been suggested that this is a corruption of Vrihia, an ancient Sanskrit name for India. A Rarotongan legend about an ancestor named Tu-te-rangi-marama tells of his living in Atia-te-varinga-nui which means “Atia-where-vari-was-abundant.” The Rarotongan word vari means “mud,” but some who are most anxious to locate the former Asiatic home of the Polynesians argue that this word is related to a southern India word padi, meaning rice, that the tradition therefore relates to a time when the ancestral Polynesians lived in India and grew rice. These scholars do not explain how the Polynesians could have preserved a memory of rice culture during the 1,500-2,000 or more years after they had left rice culture behind and were living on Pacific islands where rice could not grow and was unobtainable under aboriginal conditions. Even more tenuous than the exceedingly tenuous examples I have already cited is the allegation that because the Polynesian word for sun happens to be ra therefore the Polynesians must at one time have resided in ancient Egypt where the name for the Sun God was Ammon Ra. None of these sweeping interpretations can be considered seriously by the critical scholar because there is no evidence, aside from the accidents of linguistic similarity, to support them. Careful comparison of any two languages in the world would probably disclose similarities of such an order as this; in fact, several equally preposterous theories of relationship between various other peoples in different parts of the world have been proposed on such bases in the past, and all of them have now been discarded.
Another mythological link between Polynesia and an Asiatic homeland is embodied in the widespread tale of Hawaiki. As with all Polynesian mythology, many variations of the Hawaiki tale have been elaborated in the various island groups where it is told, but the main features of the myth are similar everywhere. The Maori version is representative:

We came from Hawaiki-the-Great
From Hawaiki-the-Long, from Hawaiki-the-Distant.

Hawaiki was the place where, before the beginning of time, there existed only Rangi, the Sky-Father, and Papa, the Earth-Mother, who dwelt in close embrace and procreated the great gods of the Polynesian pantheon. Tane, Tangaroa, Tu, and Rongo were the greatest of these. By the efforts of these children of Rangi and Papa, the sky was propped up above the earth so light could enter between them. The trees, birds, and animals of the land were produced by the sexual activity of Tane, the things of the sea were the children of Tangaroa, cultivated crops were produced by Rongo, and Tu became associated with the arts of war. The climax of creation was the production of man which the gods accomplished by molding with their hands a female human figure of clay into which they breathed the breath of life and who bore the first human child after Tane had cohabited with her. Thus the gods are directly ancestral to the human race which has partly their creative ability and partly the impure dross of the earthy first mother.

Hawaiki, then, was the first land and it was from there that the ancestors set their course toward the rising sun and so found and settled their island world. And it is to Hawaiki in the distant west that the souls of the dead return, to the homeland. Nearly every Polynesian island has a traditional departing place from which the souls of the dead embark to follow the rays of the setting sun back to Hawaiki. It is striking that the Polynesians used this name over and over for important islands in the new archipelagos they discovered in the Pacific: Savai'i in Samoa; Hawai'i, the ancient name for Ra'iatea in the Society Islands; Hawaii itself (this should be spelled Hawai'i to represent the catch in the voice that has replaced the k sound in the Hawaiian dialect), are all dialectical examples of the re-use of this name for islands that came to be home for various Polynesian peoples. Polynesians agree that these islands are named for the original homeland in the west. It is interesting to speculate on the facts that: (1) the word

1 The Hawaiki creation myth was told everywhere in Polynesia except Samoa, Tonga, and a few other islands in western Polynesia. This latter area also differed in many other ways from the rest of Polynesia, indicating that there was little communication between the two areas during certain important formative stages in the development of their respective cultures.
iki or \textit{i`i} means "little"; (2) every island called Hawaiki in Polynesia is a high mountainous one—the name was never applied to a low coral island; and (3) Java is a high mountainous island in the area southeast of Asia from which the Polynesians almost certainly embarked on their seafaring. It is, therefore, a bit more acceptable than some of the other place name suggestions to speculate that Hawaiki may mean "little Java" and may be reminiscent of the time when ancestral Polynesians lived in Indonesia, possibly on Java or on some nearby island that was called Java in those days.

There are several other indications that the ancestral Polynesians came from the island area off southeastern Asia which is known as Malaysia or Indonesia. One such line of evidence concerns the making of bark cloth which was used for clothing, bed linen, etc., throughout Polynesia wherever suitable trees would grow. Bark cloth is made by stripping off the inner bark of certain trees of which the paper mulberry is the best, soaking it in water to loosen the fiber, then pounding it with wooden clubs which thins it and spreads it out much as a block of gold is made into gold leaf by a goldbeater. The interlaced fibers of bark adhere to one another and after sufficient beating form a paperlike "cloth" which may be made of any size either by felting one strip into another or by pasting strips together. After it is made and dried, bark cloth is decorated, either by free-hand painting or by a printing technique; it can even be treated so as to be waterproof. When the manufacture of bark cloth by an isolated group of tribes in the interior of the Island of Celebes (just east of Borneo) was studied in recent years, the investigator found that the materials as well as the implements and methods of preparing the cloth from the raw material were very similar in Celebes and in Polynesia. Moreover, the Celebes names for many of the tools, processes, and materials were either identical with or very similar to the Polynesian terms. This strongly suggests a historical connection between these Celebes tribes and the Polynesians.

There are many other cultural similarities between various societies in Indonesia and the Polynesians. The use of outrigger canoes in both areas is an important example. Numerous cultivated food plants also, such as the banana, coconut, breadfruit, taro, yam, and sugarcane, are common to both regions. Likewise, the Polynesians have always had the dog, pig, and chicken as domestic animals, and these are also universally found in the islands off southeastern Asia as well as on the mainland itself. Fire is made throughout Polynesia by plowing the end of one piece of wood parallel to the grain of another piece placed flat on the ground till the wood chars and a coal is formed; this method is also followed in many parts of Malaysia. This list of similarities could be expanded to great length, but perhaps enough has been said to give an idea of the cultural
Left: Modern Hawaiian youth wearing ancient chief's costume of red and yellow feather helmet and cloak, loincloth of tapa and necklace made of many strands of braided human hair with carved whale tooth pendant. Photograph by K. P. Emory.

Right: Daughter of a Samoan chief. Her skirtlike garment is made of manufactured cloth purchased from a trader. Both photographs courtesy Bishop Museum.
PLATE 2

Left: Samoan boy.

Right: Wife of a Samoan chief and leader of the village women. Her necklace is made from seed pods of the pandanus tree, red and fragrant. Both photographs by Paramount-Flaherty Expedition, courtesy National Geographic Magazine.
PLATE 3

Left: Samoan boy grating coconut. The juice will later be squeezed out and used as flavoring. Photograph by Paramount-Flaherty Expedition, courtesy National Geographic Magazine.

Right: Hawaiian youth dressed in ancient male hula dancer's tapa kilt, shark tooth anklets, boar tusk bracelet, fern frond necklace and wreath, and carrying a gourd rattle topped with feather ornament. Photograph by K. P. Emory, courtesy Bishop Museum.
PLATE 4

Left: Maori moko or facial tattooing, showing graceful curved design peculiar to New Zealand.

Right: Tattooed Easter Islander. After an early photograph by Stoeppe.
resemblances which are sufficiently extensive to convince scholars, independently of other lines of evidence, that Polynesian culture is largely derived from a culture stratum characteristic of many societies in Indonesia.

The study of comparative linguistics concurs in suggesting a Malaysian homeland from which the Polynesians set sail into the wide Pacific. The similarities in the terminology pertaining to the making of bark cloth in the two regions have already been mentioned. Hundreds of other Polynesian words are closely related in sound and meaning to words used in Indonesia. There are also important grammatical similarities between these languages. It is so apparent to linguists that the Polynesian tongue is closely related to languages spoken in Malaysia that they group the two together as the Malayo-Polynesian family of languages just as Italian, Spanish, French, Roumanian, etc., are grouped into the Romance family of Indo-European languages.

In physical appearance and mental abilities the Polynesians compare favorably with any people in the world. Strength, agility, and stamina were necessary for the accomplishment of their great voyages, and these qualities have been perpetuated in their modern descendants. The women of Tahiti and the Marquesas are probably the most beautiful in Polynesia and would attract admiring glances on any American street. Like nearly all human populations, the Polynesians vary considerably in appearance among themselves, though hardly more than do the mixed populations of European countries—Germany, for example. Physical anthropologists find that the Polynesians are predominantly Caucasoid or "white," with wavy dark hair, brown eyes, tawny skin. Some Mongoloid characteristics are found in a small proportion of the population, such as roundheadedness (also characteristic of a large number of Europeans, particularly southern Germans and central Europeans), an occasional inner eye fold, and sometimes the flat face and the lank black hair. Some Negroid characteristics—dark skin, widened nose and lips, a tendency toward strongly curled hair—appear in some Samoans and Tongans. These traits are presumably explainable on the basis of the known intercourse between these islands and Fiji for many hundreds of years, during which times some interbreeding has occurred with the Melanesian (Oceanic Negroid) Fijians. Elsewhere in Polynesia there is occasional evidence of Negroid admixture.

As it happens, the Caucasoid physical characteristics of the Polynesians fit in very well with the belief that they entered the Pacific via Indonesia. Independent research in the latter area has led physical anthropologists to postulate that there have been three main human movements into the Malaysian region. First was a small-statured Negroid group, the Negritos or Pigmies who still live in the most inaccessible parts of some of the
islands near the Asiatic mainland. The second group to spread through Indonesia are believed to have been a dominantly Caucasoid group which has been named "Indonesian." People of Indonesian type still live in this area; the Celebes tribes whose manufacture of bark cloth is so like that of the Polynesians are such a group. The third migration into Indonesia consisted of Mongoloid peoples related to the southern Chinese, the Malays, who are today the most numerous element in the population of Indonesia.

It is thought that the present Polynesians are direct descendants of the Caucasoid Indonesians and that the population pressure caused by the Malay invasion of Indonesia may have started the ancestors of the Polynesian peoples on their search for new homelands in the Pacific.

THE EASTWARD COURSE

The evidence that the ancestors of the Polynesians came from Indonesia seems nearly conclusive and raises the next question: By what route did they get from the old homeland to the new? The frontispiece map shows there are two possibilities—through the region known as Melanesia ("black islands"), or farther north through the area called Micronesia ("small islands"). At first the anthropologists who studied this problem assumed the Melanesian route was used because it involves only easy sailing along the north coast of New Guinea, then short open water voyages via New Britain and Bougainville, through the Solomon, New Hebrides, and Fiji groups into western Polynesia at Samoa and Tonga. It was thought that the island of Savai‘i in Samoa, which is the Samoan pronunciation of Hawaiki, was the first island found by the Polynesians in the vast area they discovered and colonized and that it was from there that the further exploring voyages in Polynesia set sail.

In recent years, however, both Melanesian and Polynesian societies have been more carefully studied and compared as to their ways of living, speech, implements and tools, physiques, etc., and these comparisons make it seem increasingly improbable that the great migrations of the Polynesians passed through Melanesia. Physically, the bulk of the Polynesians are very different from the Melanesians. The latter have brown-black skin, frizzly hair, and many other Negroid characteristics. If the Polynesians had worked their way slowly through Melanesia, stopping to rest, refit, and replenish supplies, there would probably have been some racial intermixing which would still be apparent throughout Polynesia today. This argument against the Melanesian route is based on the widely held assumption that the Oceanic Negroes were among the earliest inhabitants of southeastern
Asia and had long been established in Melanesia when the Polynesians moved into the Pacific.

What used to be considered the strongest evidence that the Polynesians had passed through Melanesia is the fact that there are many small islands along the northeastern fringe of the Melanesian area between New Guinea and Fiji whose inhabitants speak Polynesian dialects, physically resemble the Polynesians more than they do the Melanesians, and have certain customs that also appear more Polynesian than Melanesian. The old accepted theory was that these were Polynesian colonies left behind by the original migrants into the eastern ocean.

Several findings of recent years have undermined the old theory. Linguistic studies on these border islands have shown that the Polynesian dialects are spoken on the sides of the islands facing Polynesia—evidence that the language was brought by the westward movements of people from Polynesia toward Melanesia. Moreover, the speech in these border islands resembles most closely that of Tonga and Samoa, the Polynesian islands nearest Melanesia, which suggests a recent acquisition of the tongue from those nearby islands. Also, these studies have shown that there are no archaic Polynesian words in the dialects spoken on the border islands; if their speech were the lingering trace of an ancient movement of Polynesians from west to east it should contain many old words such as are found in the chants of Polynesia itself and should also show a general relationship to all Polynesian dialects rather than a specific relationship to Samoan and Tongan. Besides all this, there are very few Polynesian words that show signs of having been borrowed from Melanesian languages.

Two customs that are widespread in Melanesia and are also found in Polynesia used to be cited as evidence of the passage of the latter people through Melanesia. One of these is the custom by which a brother and sister avoid one another throughout adult life, not speaking directly to one another nor remaining alone together in the same place, etc. The other is the custom whereby an individual has great power over his mother’s brothers, can appropriate their possessions, etc., while the uncle must be very polite and generous toward his sister’s children. But these customs occur in Polynesia only in the west (Samoa, Tonga, Futuna, Niue, Uvea, etc.) and are most reasonably explained as borrowings by those people from the Melanesian Fijians with whom they have long had close social ties.

Many of the non-Melanesian practices of the small border islands mentioned before that were formerly thought to show their ancestral relationship to Polynesia are now known to be comparatively recent acquisitions from Micronesia. Certain weaving techniques, the construction of some parts of outrigger canoes, etc., found on such islands as Sikaiana, Nuguria,
Ontong Java, and elsewhere in the northeastern fringe of Melanesia are like practices in the Gilbert, Ellice, and Caroline Islands of Micronesia. Moreover, the traditional histories of these Micronesian peoples tell of voyages made to the small islands to the south.

Finally, the people of Ontong Java, and probably of other island populations in this area, are physically more like the people of the Caroline Islands than anyone else. All these various types of evidence have convinced most anthropologists that these "Polynesian remnants" in Melanesia are really the result of comparatively recent influences from the east and north and do not represent the original migratory path of the eastbound Polynesians.

The only alternative route by which the Polynesians could have bridged the distance between Indonesia and their historic home is via Micronesia. If this was their course, the early navigators probably steered into the open Pacific through the gaps between Mindanao, the southernmost Philippine Island, Celebes, and the Moluccas. They then presumably proceeded through the small scattered islands of the Palau group, Yap, and the Carolines. From the eastern Carolines some explorers may have headed northeast through the Marshalls and from there made the long landless passage direct to Hawaii. Most canoes, however, probably worked southeast through the Gilberts and then perhaps split courses again, some making their first Polynesian landfall in Samoa via the Ellice Islands, perhaps stopping off for a time in Fiji; others perhaps steering east from the Gilberts through the Phoenix atolls, passing north of Samoa and sailing on to their first Polynesian home in Tahiti and the Society Islands.

As one of the leading ethnologists of Polynesia, Peter H. Buck, says in "Vikings of the Sunrise": "Strong support in favor of the Micronesian route lies in the positive evidence against the route through Melanesia." The fact is that, unfortunately for students of Polynesian history, the resemblances between Micronesia and Polynesia are not much greater than those between the latter area and Melanesia. Some scholars account for this by arguing that Mongoloid peoples similar to those who crowded into Indonesia behind the Polynesians followed them into Micronesia and took their places when the Polynesians moved on into the eastern seas. There is some evidence that this is what happened, for the present people of Micronesia are of Malayan physical type and speak varieties of Malaysian languages, besides showing many cultural features that relate them back to the present Malay population of Indonesia.

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2 Certain archeological and ethnological evidence from Luzon, northernmost island of the Philippines, suggests that some of the migrants may have started from there.
But even so, a great many Polynesian words are still to be found in the Micronesian languages. Also, while the myths of Melanesia are unlike those of either Micronesia or Polynesia, there are many resemblances between the mythologies of Micronesia and Polynesia. These facts suggest that the Polynesians came through Micronesia and left some remnants there who intermingled with the Malays that pressed into Micronesia as the Polynesians moved on eastward.

Other cultural comparisons also suggest the Micronesian route rather than the Melanesian one. For example, the bow and arrow were used in warfare throughout Melanesia, whereas in Micronesia the sling was the projectile weapon and stones were used that had been carefully ground to a bulletlike shape. In Polynesia the bow, although it was universally known and used as a toy or for sport, was never used in warfare. Instead, the Polynesians also used the sling, and in places they fashioned their sling stones precisely like those of Micronesia. There is additional evidence of a direct relationship between the Micronesian Gilbert Islands and the central Polynesian Cook and Austral Islands. This connection is a basketry helmet of peculiar shape which was used in warfare as protection against sling stones. These helmets are so specialized that ethnologists feel they hardly would have been invented twice and that it is much likelier they represent a cultural connection between the three island groups.

Because of these and other cultural similarities between Polynesia and Micronesia, and also because of the evidence against the earlier theory that the Polynesians passed through Melanesia, many ethnologists now hold the opinion that the Polynesian voyagers followed the northern route through Micronesia on their course from Indonesia into the broad Pacific. The problem cannot be finally solved on the basis of present knowledge, however, and may never be settled to the satisfaction of all Polynesian ethnologists. The possibility that some or all of the migrants used the Melanesian route cannot, therefore, be dismissed. Peter Buck is of the opinion that, though the Polynesians themselves steered through Micronesia in their migration, many of their characteristic food plants came from Asia via Melanesia. We shall examine this theory later.

SHIPBUILDING AND SEAFARING

We cannot know, with certainty, what the ships were like in which the Polynesians first started out from their Indonesian home. Presumably these explorers had been fisherfolk, accustomed to short sea voyages at least, and had evolved reasonably seaworthy vessels before they set out on the broad seas to find new lands. None of their early craft has been preserved
since the time, probably about 2,000 years ago, when their ancestors left
the comparatively enclosed waters of Indonesia. The best we can do toward
knowing the ships the explorers used is to know about those the Poly-
nesians were still using for long ocean voyages when the first Europeans
came to their “South Sea Isles.”

The Polynesians had many types of canoes which varied according to
the uses for which they were intended and also differed somewhat from
region to region. The simplest was the small dug-out fishing canoe used
by each family for fishing in protected waters, running errands, etc. Most
Polynesian men are still able to make these craft by shaping and hollowing
a log and attaching an outrigger float by means of two cross booms to
prevent the too narrow craft from capsizing. But larger canoes, intended
for use in deep-sea fishing, required much greater skill in the fashioning.
They had to be given greater protection from larger waves by adding a
plank (strake) standing on edge along the gunwale which increased the
height or freeboard of the canoe. They had to be built by experts to insure
seaworthiness, and the outrigger float had to be larger and more securely
fastened to the hull. These larger canoes were fitted with sails made of
matting, and the construction of both sails and rigging required extensive
knowledge and skill. But even such boats as these usually carried only a
half-dozen men and their catch, and usually returned to land each night.
A ship built to carry a large number of men, women, and children, together
with supplies of food and water, on a long ocean voyage, was much larger
than the biggest fishing canoes, and more difficult to build. They were com-
monly 60 to 80 feet long and some were over 100 feet. In these big ships,
the log that formed the entire hull of a small family canoe and most of the
hull of the deep-sea fishing canoe, shrank in importance to little more than
the keel section. Most of the hull was built up of planking. The outrigger
float of these big canoes was also too big to be made of a single log so a
second, often somewhat smaller, plank-built canoe took its place. A plat-
form was built on the booms connecting the two hulls and on this platform
a cabin was erected for protection against sun and spray.

The building of such huge ships and seagoing fishing boats was a
tremendous task to men who had only stone and shell from which to make
cutting tools, and who had literally to sew their ships together with cord
made from the fiber of coconut husks because they had no nails or other
metal fastening devices. These vessels were highly important and valuable
to the Polynesians who depended constantly on fish as a major part of
their diet and who also had a fearless and abiding desire to explore ever
farther into the mysterious ocean.
In such a context, whenever a thing made an important contribution to the public welfare and was at the same time difficult to make or obtain, it, the processes by which it was obtained, and the men who produced it were all under the direct influence of the high gods of the Polynesian pantheon. For religion, to the Polynesians, was intimately related to everyday life, and the gods actively helped men to do their important jobs of producing social goods. Some understanding of shipbuilding, including the essential religious and mythological aspects of it, will help us to realize the high esteem Polynesians accorded to all skilled workmen and to the labors by which they produced valuable new objects for the use of the society.

According to the creation myths of the central and marginal Polynesians, the great trees from which seagoing canoes were made were the descendants of Tane, one of the creator gods. They therefore belonged to no man but to the gods. But the chief of a tribe, who was more closely related to the gods than was any other member of the tribe (since eldest sons inherited most of the mana of lineage and chiefs traced their lineages mostly through eldest sons back to the gods of creation), was able, by virtue of near relationship to Tane, to intercede with that god and obtain his permission to cut a tree to make the canoe needed by the tribe.

Sometimes when the chief went to select a tree for the proposed seagoing canoe he could not find a satisfactory one on the land controlled by his own tribe. He might, however, locate one on the land of another tribe. He would then send a present to the chief of the other tribe, but without making any specific request. If the other chief accepted the gift he was honor bound to grant the request that would be made later for the desired tree. A great chief was one who accepted such gifts and the obligations they entailed; a niggardly chief who would not participate in such a gift exchange lost prestige, not only in the eyes of the petitioning chief and his followers, but in those of his own tribe as well. So there was heavy social pressure on a chief to accede to such a request and it was usually granted.

When a desirable tree had been found and set aside for shipbuilding by a religious ritual performed by the chief, the expert canoe builder was summoned by a gift of food and valuables. (An informal agreement had previously been entered into between the chief and the expert and the two had probably gone out together to locate the proper tree.) This expert was not only adept with tools and trained as a canoe builder, he was also a priest learned in the essential religious rituals and ceremonies that had to be observed when men took the children of the gods for their own purposes. The Polynesian term for such men who were at the same time
superb craftsmen, able leaders of workmen, and accredited priests of their calling was tohunga. Individual tohunga specialized in various crafts such as canoe building, house building, agriculture, fishing, leading war parties, etc. A man could be an expert in several such public activities. This did not happen often, however, because a youth had to spend several years working hard to learn all the complex skills of a single craft, the efficient methods of parceling work among the group of helpers, and the vast number of ritual formulae that were necessary to maintain the proper relations with the gods at each step in the operations so as to insure their active interest in and support of the proceedings.

The night before work on the ship was to start the tohunga, who now took over the leadership of the enterprise together with the responsibilities and prestige of leadership, called his work crew together and performed a ritual over them which temporarily set them apart from the other members of the tribe and brought them into closer relationship with Tane and the lesser gods under him, all of whom had to do with shipbuilding. When a crew of men had been put in this ritual status by a priest, they were prohibited (the Polynesian word is tapu or tabu) from mingling with other people, even their families, and most especially they could not associate with any woman. Neither could they eat ordinary food prepared by women over family cooking fires. An offense against these rules would insult the gods, who would punish the offender by causing him to become ill and perhaps to die. Moreover, the gods might withdraw their beneficent interest in the whole project and doom it to failure. But if all the men (and the excluded public, as well) observed the tabus, then the gods would smile on the undertaking, thus bringing propitious weather, enabling the workmen to utilize their skills (mana) to the utmost, preventing bad luck of various sorts including accidents, and generally guaranteeing the successful outcome of the venture. The tohunga conducted additional ceremonies and recited the appropriate ritual formulae at every important stage in the construction so as to maintain the interest of the gods in the project and ritually insure its successful outcome.

The keen stone adzes and chisels of various sizes and shapes, and the other tools, were also ritually prepared for the work by the tohunga, who, by established ritual procedures, consigned them to the care of the gods. The priest and workmen laid aside their ordinary clothes (lest they carry to

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3 This is the Maori form of the word. In other Polynesian dialects the word becomes tufunga, tufanga, tabua, kabuna, etc. Such sound shifts characterize many Polynesian words and follow regular rules. If one knows the Samoan form of a particular word, for example, and the rules of sound changes, the form of the word in any Polynesian dialect can be determined.
the work some defilements from everyday life) and slept in a secluded place. Early the next morning, after additional ritual preparation and a breakfast of special food, the men proceeded to the site of the selected tree. There, after a last plea to Tane to forgive them for destroying one of his children, they cut the tree down with their stone tools. Then they trimmed the branches, cut the bole to the proper length, removed the bark and roughed out the interior. During all this time—many days if the canoe was to be a large voyaging ship—the men lived apart and avoided all contact with ordinary food and with people who were not members of the work group.

Now the future ship was usually dragged from the forest to the shore—sometimes a considerable distance on a large volcanic island. For this task additional help was sometimes enlisted, requiring the ritual preparation of the newcomers to make them fit to approach the partly finished craft. Sometimes, too, part of the high ritual status of the operation was removed at this point by means of a ceremony in which the ceremonial virgin of the village played an important part, since she represented a ritual condition intermediate between the exalted one of the workers and the unfinished canoe, and the lowly one of ordinary people and daily activities. After this ceremony there was often a feast to symbolize the nearer approach of the canoe and workmen to ordinary ritual status.

At the shore a shed was built over the incomplete hull to shield it and the workers from the weather. The hollowing and smoothing of the log to a thin-walled, properly-shaped keel section was completed while other men were splitting out planks for the sides. These planks were next smoothed and trimmed to fit together in the proper form with nearly watertight joints. Then holes were bored close together along the upper edges of the log section and along all edges of the plank parts, and the hull (no Polynesian canoes had ribs) was assembled by sewing the parts together with cord made from coconut fibers. This was, of course, a very crucial step, for unless the pieces were well fitted and fastened the ship would be asymmetrical and a poor sailer and leak excessively, or it might even break up in a gale or hurricane. The final shaping of the parts and the fastening were done, therefore, by the tohunga and his first assistant. The seams were sometimes treated with beaten coconut husk and bread-fruit gum.

After the main hull was finished and painted the traditional red (for high rank, the gods) and black (for the common people, women) and the intricately carved decorative stern and prow pieces attached, the smaller outrigger hull was similarly fashioned and the two hulls firmly fastened together by means of stout cross booms. The space between the two hulls
was then decked over. On this deck a cabin or canopy was usually built. The ship was now ready for the launching.

The launching of a mighty deep-sea canoe was an event of such supreme importance that all the people of the district took part in the gala occasion. They had all been working hard at the chief's behest since before the felling of the tree, raising extra food crops to feed the workmen and producing valuables of various kinds for gift payments to them. Everyone in the tribe thus had a stake in the beautiful new ship. So a feast was prepared at launching time and everyone gathered on the beach dressed in his finest clothes and ornaments, garlanded with flowers and sweet-smelling herbs, to see the fruition of the common effort. The ship was given its own personal name and usually dedicated to Tane. Then wooden rollers were placed under it. The workmen, given extra strength by the priest's final invocation to the gods who had been helping all along, urged it into the sea amid the deafening shouts of the assembled populace.

The canoe was equipped with mast, sails made of plaited pandanus fiber, coconut fiber (sennit) rigging, paddles, bailers, and stone anchors. All Polynesian sails were triangular. Some were rigged as lateen sails, some as vertical spritsails. The former type were commonest in the west, in Samoa and Tonga, the latter were typical in the rest of Polynesia. There were paddles for propulsion in calms and a large steering paddle that served as a rudder. So important were these latter that they received personal names which are handed down to us today in the legends of the migrations along with the names of the canoes, their captains and navigators.

Exploring ships were built for many reasons in historic Polynesia, and the same is probably true of prehistoric times. Sometimes a younger brother of a high chief, jealous of the superior status of his elder brother, would gather a following, build a ship and sail off to find new lands where he could be supreme chief. Sometimes, apparently, a chief went exploring just for the adventure and the fame that the Polynesians always accorded great sailors. Often, too, an ocean migration was the result of warfare. A defeated chief might be allowed, through the magnanimity of his conqueror, to build a ship and sail away with a few of his followers. Or a chief might build a canoe in order to pursue an enemy who had fled his wrath. In Tonga the sons of high chiefs regularly led voyages to the Fiji Islands where they learned the arts of war by becoming soldiers of fortune and leaders in the recurrent Fijian wars. Then, too, many voyages were made between Tahiti and Hawaii and other islands to visit relatives and friends.
The provisions for the 60 or more emigrants that were the complement of a colonization party were mostly cooked or dried before they were taken aboard. Flour made from the fruit of the pandanus tree, cooked, dried, and packed in cylindrical bundles, was a staple of those starting from atoll islands. Cooked breadfruit or sweet potatoes also offered high food value for their weight and bulk. Dried fish and shellfish were provided and supplemented with the fresh fish easily caught at sea by these master fishermen. Green coconuts and calabashes or bamboo joints filled with water were taken for drinking purposes. A fireplace laid on a bed of sand was provided and firewood was taken. Some livestock—chickens, dogs, and pigs—were also taken to stock the new land or to eat if food ran out before land was sighted. Before a long voyage the crew was trained to subsist on a minimum of food and water. Thus it was comparatively easy to carry adequate supplies for the 3 or 4 weeks required for the longest interisland voyages in Polynesia.

Modern people, accustomed to the well-equipped ships of today, marvel at the navigational feats of the Polynesians. How could these stone age people, without compass or charts or mathematical knowledge, possibly have set out purposely to find tiny bits of land in the vast ocean? And how could they sail their rude ships eastward against the easterly trade winds when our own great clipper ships used to go far out of their way to get a fair wind and avoid bucking head winds? The latter question is the easier one to answer. The southeasterly trade winds blow regularly in the south Pacific from October to May. But during our summer months the winds are variable and there are occasional hurricanes. The Polynesian people were, and still are, adept at weather forecasting and were able to pick a favorable wind that would hold for several days and speed them in whatever direction they wished to travel. The question of how they found new islands is harder to answer because the navigational lore of the Polynesians was largely forgotten before anyone thought to record it. The few hints that remain, though, suffice to suggest the extent of what once must have been an extensive body of navigational principles. The Polynesians knew many constellations of stars and their positions in the sky at different seasons. This knowledge was used to maintain the ship’s course as was also their extensive knowledge of the significance of different kinds of ocean swells and their directions. Even today the Polynesian who is searching for a low-lying atoll will often find it while it is still hidden beneath the horizon by noting a faint greenish reflection on the clouds above the island. The appearance of drift materials and the flight of land birds also furnished material for keen deductions as to where land lay. The golden plover, for instance, summers in Alaska and winters in Poly-
nesia. It is quite possible that early explorers from central Polynesia first found Hawaii by following its flight in the certainty that it would lead them to land.

THE NEW LANDS

In their first movements from Indonesia into the western Caroline Islands the ancestral Polynesians encountered volcanic islands with rich soil, and abundant basaltic rock useful for fashioning tools. These islands, though smaller, were similar in natural resources to the Malaysian homes they had left behind. Presumably, if these islands were unoccupied when they arrived, they settled down and planted the seeds they had brought with them and encouraged the increase of their domestic animals. Later on, wars in Malaysia, disagreements over women, the ambitions of younger sons of chiefs, etc., probably caused boatload after boatload to take the eastward course. When these newcomers encountered islands already occupied they settled there, too, if there was enough land and if the earlier occupants made no objection. In either of these latter cases, however, the latest comers either had to move on or fight for a foothold. In the case of a fight the losing side probably took to the sea if the victors permitted it. Sometimes, probably, the victors hunted the vanquished down like game and ate their roasted bodies. At least this was the victor's privilege in Polynesia if he chose to exercise it. If the vanquished were permitted to escape, they might be forced to sea on hastily built rafts which would have meant death in most cases. Or the victors may have given them time to build proper seagoing canoes and thus unwittingly extended the sweep of Polynesian exploration. Anthropologists do not postulate, in other words, a rapid, always purposeful exploration of the Pacific. It is thought, rather, that for the most part people lived on a given island till it became uncomfortable for some of them through overcrowding, factional disagreements, or the like. Only then would the disaffected party move on, tending always to move toward the rising sun because the islands to the west, toward Hawai'i, were even more crowded than those on the frontier.

But as the Polynesians thus slowly worked eastward through the Caroline chain they left the high, fertile, volcanic islands behind them and came to the region of coral atolls. Atolls are islands that result from the activity of the coral polyps in synthesizing carbonate of lime from sea water and precipitating it as solid limestone. In this way these tiny animals build up coral reefs in comparatively shallow warm seas. In the Pacific a great many of these reefs assume a roughly circular or elliptical form. Some are less than a mile in diameter, others such as Tongareva are 10 to 15 miles across. In time the reef grows to the surface here and there and a ring of small
Fig. 2.—The structure of a coral atoll.

Upper, sketch map of an atoll showing an elliptic reef enclosing the shallow lagoon which is studded with barely submerged coral heads and shoals. Islets are scattered around the reef and two of them, near the natural entrances to the lagoon, are inhabited.

Center, schematic cross section of an atoll, vertical distances exaggerated.

Lower, air view of an atoll. The islets are covered with coconut palms and other vegetation. The lagoon is light against the dark sea because it is shallow and the bottom is composed of light coral rock.
islands appears. These, together with the submerged reef between them, encircle a protected lagoon. Such islands are composed entirely of limestone and the products of its disintegration. They are very low, seldom rising more than 20 feet above sea level. Their soil is unproductive, fresh water is scarce, and there is no dense stone suitable for making the tools and weapons of a stone age people. The natural vegetation that would slowly gain a foothold on such isolated islands is not sufficient to sustain human life. The only land animals are a few species of far-flying birds, and such minor forms as snails, spiders, etc. On the other hand, the rough coral reef and the sheltered lagoon furnish homes for numberless edible fish and shellfish of many varieties.

Such were the islands the Polynesians encountered when they pushed into eastern Micronesia. In this environment none of the food plants they had brought with them from Indonesia could grow except the coconut and a coarse variety of taro. Nor was there food to keep their domestic animals alive. The twin staffs of life during this period became the coconut and sea food. The fruit of the pandanus tree, which may have been growing wild on these islands when the Polynesians arrived or may have been brought by them, yields an inferior food which helped the people to eke out a spartan existence. There was no material suitable for making cloth but mats were made of the leaves of both the coconut and the pandanus. Since there was no stone suitable for the making of tools, they resorted to implements ground from the shell of a giant shellfish, the tridacna. Shark's teeth were used for small cutting tools and sharkskin for sandpaper. There is no clay on such islands, so the people could make no pottery. They used coconut shells for dishes. The earth-oven method of cooking was used extensively. This method is widespread in southeast Asia and elsewhere in the world as well. It consists in heating a great many boulders to a high temperature, then putting them with the food that is to be cooked in a pit which is then covered over and left for several hours or overnight. The stone oven is still the usual method of cooking throughout Polynesia.

The people did the best they could with these inhospitable islands. They introduced the coconut wherever they went—every island in the Pacific that shows any signs of former habitation still has its coconut trees. This tree was used to the very limit. Its nuts furnished food and the milk of immature ones made a delicious drink much preferable to the brackish water that is obtainable from shallow wells on coral atolls. Its trunk furnished timber. The fibers of the husk that encloses the nuts are still used to make good rope and cord as well as strainers. The leaves are
used to thatch houses, are woven into mats and baskets, made into torches, and used as wrappings for food that is cooked in the earth ovens. But the limitations of this environment probably forced the Polynesians to give up many of their old skills if they stayed long in eastern Micronesia. This probability increases our difficulties in trying to trace the Polynesian ancestors back to any particular place and time in Indonesia, for many clues may have been lost through the cultural specialization involved in eking out a living on coral atolls.

It may be, however, that the Polynesians did not stay long in this area. Certainly these islands, which are small as well as barren, could never have supported a large population. Some canoes may have passed through the Marshall Islands and ventured out on the long voyage that led them to Hawaii. This is postulated on the grounds that when the Hawaiians later told their legends to Europeans they told of (and could prove) colonization from the Society Islands and long-continued intercourse with them. But, say the legends, when the first Tahitians came to Hawaii, they found an aboriginal people with rude culture whom they enslaved or exterminated. Unfortunately these aborigines are described as elfinlike people, which has caused some scholars to discount the whole story. But if the physical description is discarded, the rest of the story may describe a people whose culture had become simplified in eastern Micronesia and who had then gone on to Hawaii.

At any rate it seems likely that an important stream of Polynesian migration went eastward through the Phoenix group, more coral atoll islands, and made their first Polynesian landfall in the Society Islands, possibly at Ra’iatea, which was anciently called Havai‘i. Smaller numbers probably filtered through the Ellice Islands, or south from the Gilberts, direct to Samoa. Such an ancient split might help explain the differences between some of the customs of western Polynesia—Samoa, Tonga and nearby islands—and the rest of Polynesia.

When the Polynesians finally reached the high volcanic islands that predominate in Polynesia proper, they found much fairer lands than they had known in eastern Micronesia. Many of the volcanic islands rise several thousand feet into the air, and their crests are hung with clouds from which are born numerous streams of sparkling water that cataract down the mountains into fertile valleys. These valleys, with their rich volcanic soil and plentiful water, will produce a large variety of crops with minimum care by the farmer after he has once planted them. The forests of these islands abound in big trees suitable to use as beams for large houses or as hulls of large sailing canoes. The basaltic rock is excellent for stone tools and weapons. The sea still supplies innumerable fish,
for most of the high islands have coral reefs offshore. These reefs also protect the shores from storms and insure easy movement from place to place about the shore via the protected lagoon.

The high islands offered the newcomers potentialities rather than milk and honey, however, for none of the food plants on which the people later subsisted were native to these lands. Neither were there any land animals other than birds. If we accept Dr. Buck's theory that the Polynesians tarried long enough in eastern Micronesia to lose their domestic animals, most of their food plants, and many of their arts, and if we also accept the hypothesis that the first comers to central Polynesia entered the area by passing north of Samoa, then we must visualize them as at first unable to profit greatly by the fertile land in which they now found themselves. For, according to this theory, they had at this time only the coconut and a coarse variety of taro, no domestic animals, no bark cloth, no breadfruit, bananas, or fine varieties of taro, no yams, no sweet potatoes. Presumably they also had to relearn the making of stone tools since they had been using the more easily worked but less durable tridacna shell in Micronesia. Dr. Buck suggests that Tahiti and Samoa were settled by separate groups of Polynesians who pursued different routes from Micronesia. (See the frontispiece map.) The Samoans, he suggests, made contact with the Fijians, the northeasternmost Melanesians, and from them got most of the domestic plants and animals which formed the material basis for the later efflorescence of Polynesian culture. There is some evidence favoring this interpretation. In the first place, there is a continuous chain of continental or volcanic islands stretching from the Asiatic mainland through Melanesia to Fiji so that men could easily have brought to Fiji by that route the domestic plants and animals that are dependent on good soil for survival. Another bit of evidence Dr. Buck cites is a legend still current in Samoa that long ago they used to get pigs from the Fijians by trade. In the interest of maintaining a monopoly the Fijians permitted them to take only dead and dressed pigs from Fiji. But, says the legend, one smart Samoan chief hid a number of live piglets in the body cavity of a large dressed pig and thus succeeded in breaking the monopoly and introducing pigs into Samoa.

There are at least three possible ways, besides the one Dr. Buck suggests, by which domestic plants and animals may have reached Polynesia. In the

PLATE 5

Omoa Valley, Island of Fatuhiva, Marquesas. A typical steep-sided Marquesan valley representative of the most beautiful and fertile high volcanic islands of Polynesia. The valley floor is clothed with coconut palms and other food-producing trees. Photograph by Rollo H. Beck, courtesy National Geographic Magazine.
Plate 8

Upper: View of a typical coral atoll island in the Tuamotu. Submerged reef and an islet in foreground, lagoon in middle distance, and farther rim of the atoll in background. Villages can be seen on both the islets in the right background. Courtesy National Archives.

Lower: Rapa Island in the Tubuai group. One of Polynesia’s dry volcanic islands. The remains of an ancient fortification crown the central eminence. Photograph by J. F. G. Stokes, courtesy Bishop Museum.
first place, the presence throughout Polynesia of the characteristic food plants and animals of Melanesia can be urged as strong evidence that some or all of the migrants to Polynesia really passed into the Pacific via Melanesia. This correspondence is important enough to neutralize many lesser arguments against the Melanesian route. Or, if the route through Micronesia is provisionally accepted, the suggestion can be made that the original migration into central Polynesia may have gone by way of Samoa instead of passing north of it. If that happened we can suppose that the Tahiti-bound colonists picked up in Samoa the various domestic plants and animals which the Samoans had already acquired from their Fijian neighbors. One may also question the assumption that the Polynesians stayed long enough in eastern Micronesia to lose their domestic plants and animals and some of their characteristic crafts and arts. It seems possible that they might have gone right on through when they saw how inhospitable these atolls were in comparison with the volcanic islands they had left behind. Or maybe early comers to Micronesia had to stay because their provisions ran out. In that case later comers might have stopped by the way only long enough to replenish their stores and thus have succeeded in reaching either Samoa or Ra’iatea with their breeding stock and seedling plants intact.

The theory of a long stop in eastern Micronesia with the consequent loss of arts such as the making of bark cloth does not accord with the evidence cited earlier of the relationship between the tapa industry of the island of Celebes and that of Polynesia. For if the Polynesians had lost the tapa-making art and relearned it from the Melanesian Fijians, the second learning would have been new to the generation that reacquired the art and they would doubtless have taken over Fijian techniques and terminology. This bit of evidence argues, therefore, that the Polynesians passed rather quickly through the area where the raw materials of bark-cloth making would not grow. But no one piece of evidence is conclusive and there is not a preponderance one way or another on this matter so far. Intensive archeological work in eastern Micronesia might help solve the matter, but it has not yet been done.

THE BIRTH OF THE GODS

However it came about, the people at the hub of Polynesia did acquire, in addition to the coconut and coarse taro, the breadfruit tree, the yam, the banana, sugarcane, many varieties of finer taro—both the swamp and the upland kinds—the pig, chicken, and dog, all of which were used for food and were brought, by one route or another, from the Asiatic main-
land. They also had the sweet potato when the Europeans came upon them, but this acquisition is a separate story which will be considered later. This wealth of food grew and multiplied with a minimum of care in the rich soil and benign climate of Havai‘i (Ra’iatea) and the other islands of the Society group. The population grew, too, till it numbered many thousands in this small group of islands. The organizational needs of this large population prompted the elaboration of the political and religious structure of the society.

According to Tahitian legends the first Polynesian priestly House of Learning was established on Ra’iatea where the senior families and the most learned priests had settled in the district of Opoa. Here, it is said, the priests systematized the complex Polynesian mythology whose roots doubtless lay in the tales and beliefs the people had brought from Indonesia or had developed along the way. The great gods of central and eastern Polynesia were allegedly born here. In later days explorers brought the ways of life and the gods of central Polynesia to the distant lands they found—to Hawaii, Easter Island, New Zealand, and to all the islands in between. But in the west—Samoa, Tonga, and a few other islands—different gods, a different mythology, and different customs were evolved. This independent development may have occurred before Tahiti had been settled. Or possibly the differences merely indicate that communications between Tahiti and the west were poor during the formative stages of their respective cultures.

But aside from the Samoan and Tongan development which did not affect the distant islands of Polynesia, the first center of things Polynesian was in Ra’iatea, anciently Havai‘i. Here the population first grew to large size, and families of high rank each came to rule over several thousand subjects and a well-defined district of the island. This form of political organization was still in effect in Tahiti in Captain Cook’s day, around 1770, when eight separate districts were recognized, each ruled by a hereditary chief. No one chief was paramount over the others. All the chiefly families were interrelated through marriage, for none of them would marry their own subjects who were inferior to them in inherited rank. This political system was maintained against aggressors by loose and shifting alliances between districts. If one chief became belligerent or too haughty, his neighbors banded together against him and his people even to the extent, if necessary, of making war on them and temporarily driving them from their lands to the mountains. The victors then had the right, which they sometimes exercised, to hunt down the vanquished and either sacrifice them to the victorious gods or serve them up as food for the victorious warriors. But only rarely, in Polynesia, did any conqueror
claim the right to take the land of the conquered. In New Zealand, for
instance, the land and the "tribe" which occupied it belonged together
through generations of association. If a conqueror had tried to use this
land, it would not have been productive because his gods would have been
unfamiliar with it and without power over it.

The Polynesians did not subscribe to our notions of the privacy of
ownership of land and its products. It is misleading to say that a tribe
"owned" its territory, even more so to say that the chief owned it. In the
Polynesian view of the world the firmament, its plant and animal life,
the sea and its denizens, as well as man, were all genetic descendants of
the creator gods. The chief, or *ariki*, of a tribe was the member who
claimed closest kinship to those creator gods and who therefore acted as
intermediary between the people and the gods to secure, among other
things, the right of the people to utilize their distant kinsmen, the products
of land and sea, for socially constructive ends.

The mythology which stated this view of the world was what the early
priests built up in the Opoa district of Havai‘i in the dawn of Polynesian
history. The mythology of any people is a vital part of their lives. In it
are embodied the major principles on which the organization of the society
is based. Myths describe the "good life" as that society defines the good
life and also state the moral principles individuals are expected to observe.
The goals of life are to some extent unique in every society, and the moral
rules of one society often differ greatly from—may even be incompatible
with—those of other societies. The behavior of an individual who is a
member of an alien society can be understood and fairly judged only in
terms of the precepts of his own society. It is therefore essential to have
a working knowledge of the mythology of that society if one wishes to
appreciate the motives and behavior of its members.

Myths are usually couched in terms of the distant past: "This is what
happened to the ancients." It is a nearly universal human trait to revere
and accept as sufficient authority for present action what purport to be
anciently established precedents. Whether the events described in myths
are really ancient, or whether they ever really happened at all, is irrelevant
to the function myths play in giving religious and moral sanction to the
beliefs and behavior of the people who accept them. With these remarks
in mind let us briefly review the exceptionally poetic and philosophical
view of the world, the rich mythology, which was probably developed at
Opoa and which affected every act of the old-time Polynesians. This will
help us to understand them and also the island dwellers of today who have
not completely forswhorn their old ways and beliefs even after two centuries
of proselyting by Christian missionaries.
In the beginning there was Ta’aroa. For countless ages he huddled in an egg-shaped shell, Rumia, in endless space in which there was no sky, land, sea, moon, or stars. It was the countless period of impenetrable darkness. Finally Ta’aroa hatched himself, stood in the shell and called in all directions, but there was no answer from the void. He retired to an inner shell and lay quiescent for another uncounted period. At last he felt the urge to create. He emerged and made the inner shell of Rumia into a foundation for the rock and soil of the world, and the outer shell he made into the dome of the sky which hung close to the newly created earth. Ta’aroa created many kinds of rock and soil and then he conjured up Tu, the superhuman craftsman, and together they formed the myriad roots. The dome of Rumia was raised on pillars to make space between earth and sky. The underworld was set apart. Ta’aroa created forest trees and food plants and the living things appeared on the land and in the sea. This was Havai’i, the birthplace of other gods, lands, and man.

Besides Tu, the gods Atea, Uru, and others were created and the stars and winds were born. But still the land was swathed in darkness. Atea was female in this early mythological period and of her was born Tane, sired by Ta’aroa. Tane was without form, and skilled artisans were called to shape him but were frightened away by the majesty of Atea. So she did it herself. The operations, including the boring of the ear passages with a fine spiral shell, are minutely detailed in the myth. Tane became the god of beauty but Ta’aroa was more powerful and became the god of craftsmen. Ro’o, another major god, was born of a cloud and became Tane’s colleague.

There are three Tahitian myths regarding the creation of man, none of them very detailed. All three are met with in other parts of Polynesia, sometimes in much elaborated form. One version is that Ta’aroa took to wife Hine-ahu-one (Earth-formed maid), whom he had molded of earth, and produced Ti’i, the first man. By another account Ti’i, who had been conjured up by Ta’aroa, formed the woman of earth at Atiauru, begot a daughter with whom he committed incest to produce the first mortal man. The “official” version, probably developed comparatively late to extol the high rank of chiefly families and separate them from the common herd, states that Ta’aroa, aided by Tu, created Ti’i, the first human being. In this version Ti’i was apparently formed from earth. He married the goddess Hina, daughter of two supernatural beings. The children of Ti’i and Hina intermarried in the primeval darkness with the gods of that time. The children produced by these matings became the ancestors of the

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4 Tangaroa in New Zealand, Tangaloa in Samoa, Tanaoa in the Marquesas, Kanaloa in Hawaii.
high chiefs who were therefore entitled to wear the red feather girdles reserved for the use of the people of highest rank, but the children that were simply conjured up by these early supernaturals became the ancestors of the common people. Thus the myth was developed that only in the veins of the chiefly families did the blood of the gods flow.

In this early era of creation the great culture hero Maui was born. He was the youngest of five brothers, was born prematurely and apparently dead, and was cast into the sea. But the gods took pity on him and raised him to manhood in a coral cave beneath the sea. He thereupon returned to his family and made himself known (this is a recurrent theme in Polynesian mythology). In his manhood Maui performed many miracles. For most Polynesians, he it is who fished up many of the islands from the bottom of the sea, but he is not credited with these feats in Tahiti. Maui also, after the gods had set the sun in the sky so there would be light on the world, slowed that body down with a rope so that the days would be longer. Out of that exploit, too, he is sometimes credited with introducing fire to the earth. Maui tried to obtain immortality for the human race but barely failed and lost his own life in the process.

According to Tahitians Ru, Maui’s grandfather, was the first who dared face Atea, God of Space, and seek to raise the sky high enough above the earth to let in light. Ru got it as high as the mountain tops, where it rested on the leaves of the arrowroot, which have been flat ever since. The effort made him humpbacked, so he stopped. The task was attempted by others and all failed till Maui tackled the job. He decided it was necessary to remove the pillars on which Rumia rested so as to detach the tenacles of the Great Octopus who was holding the sky and also to relax the grip of Atea who held the earth. Maui was not strong enough but he went to Tane in the tenth heaven and enlisted his aid. Together they succeeded in pushing Atea high above the earth and letting light into the world. The sun, moon, and stars were set on the dome of the upraised outer shell of Rumia, and man took up the human life we know.

The other islands of the leeward group were at this time conjured up out of the sea. The windward group, though, according to mythology, was created after the religious center at Opoa in Havai’i was established. The story says that at that time the channel between Havai’i (Ra’iatea) and ‘Uporu (Taha’a) was solid land and the two islands were one. Because of an impending religious ceremony strict injunctions against all non-essential activities were imposed at Opoa. All must be still, even the animals must not sound, and no man might walk abroad. The wind ceased and the sea became calm. In violation of this edict a beautiful girl, Tere-he,
secretly went to bathe in a stream. The gods punished her by causing her to drown. A great eel swallowed her, and, becoming possessed with her spirit of defiance, he tore up the foundation of the land between Havai‘i and ‘Uporu. The uprooted land floated away on the sea like a great fish. The gods did not interrupt their ceremony or attempt to rescue the derelict land but Tu, the supernatural artisan of Ta‘aroa, took charge of it and guided it east and south over the horizon. The fish lost its tail which became the island of Tahiti-iti (Little Tahiti), now called Mo‘orea. Other fragments became the small islands of the windward group and the body came to rest as Tahiti-nui (Great Tahiti) with the dorsal fin forming its mountain crest. Tu, his piloting job finished, returned to the ceremony at Opoa.

When Tahiti thus floated away from Havai‘i there were brave warriors on it but no high chiefs. And when Tu returned to Opoa Tahiti was left without gods. In later times these early people were called manabune, with the connotation of people without high chiefs or gods. (The Hawaiians use a similar term for the legendary early rude inhabitants of that group.) The chiefly families of later days in Tahiti did not admit blood relationship with these ancients, and so the word manabune came to mean something akin to plebeian. (This allegation was given authority by the “official” creation myth given above wherein the priests alleged a divine ancestry for the chiefly families only.) As Peter Buck says: “Both high chiefs and gods have belittled the achievements of the early people who made their creation possible.”

Several generations after Tahiti had come to rest in its new location, although life went on serenely, the warrior chiefs became uneasy lest their fish once more drift away. Efforts were made to cut the sinews of the fish but to no avail. They called upon the old gods for aid but these did not heed. A warrior, Tafa‘i, thereupon sailed south to Tupua‘i in the Austral Islands seeking assistance. The high chief of that island asked what gods had assisted the Tahitians and Tafa‘i answered: “None! Tahiti-manahune stands there without gods!” Thereupon the high chief gave him a stone adz named Te-pa-huru-nui-ma-te-vai-tau which was divinely inspired. With it the Tahitians succeeded in their desire. They severed the fish’s sinews just behind the head, thus forming the present isthmus of Taravao, and effectively anchoring their island for all time.

Later the gods of Havai‘i descended upon Mo‘orea, and then the Tautira district of Tahiti. The gods were tyrannous and demanded the heads of warriors. The people fled in dismay to the mountains. Famine was upon the land. The people implored the gods not to destroy them, and the gods
promised them safety at the price of obeisance. The people then returned to their homes without fear and erected temples to the conquering gods.

This is a much abbreviated account of the myth describing the origin of Tahiti and gives only a faint hint of the poetic gusto with which words are chosen and incidents related that gives the original story real literary merit beyond whatever value it has as a historical account of early happenings in Tahiti. Peter Buck, whose mother was Polynesian, has been from early childhood familiar with the poetic mode, rich with mythological references, in which Polynesian storytellers and orators habitually couch their dissertations. He feels that the myth of the origin of Tahiti recounted above is based on actual historical events and interprets the account somewhat as follows:

The early priests at Opoa became tyrannous in their rule. This is indicated by their imposing silence on domestic animals, commanding the sea and wind to be still, and prohibiting men to walk about. The action of the maid Tere-he symbolizes what was actually a rebellion of the people against this tyranny. Tere-he means "Floating-away-through-sin" and aptly illustrates the characteristic Polynesian method of recording events by giving them proper names and personifying them. Her death and the struggles of the eel indicate that the priests took reprisals on the rebels. As a result, the warlike Manahune, who worshiped the god Tu (he piloted the fish), set out in their canoes to find a new home. The breaking away and floating off of the land (remember the close association between people and land in which Polynesians believed) is a figurative description of the people's emigration in a fleet of canoes and of their finding the windward group of islands. The gods who, according to the myth, later descended upon the Tahitians and conquered them were really warriors from Opoa who had remained faithful to the old gods.

There is no possibility of adducing evidence to prove or disprove Dr. Buck's thesis that this myth of the creation of Tahiti is an allegory based on real historical events. In the absence of any independent recording of the alleged events we have no basis other than personal predilection for evaluating the historical accuracy of his or any other interpretation of this myth. But we can disregard the insoluble problem of its worth as history and consider the tale in terms of the role it played in the daily lives of the Tahitians who told it. When we do that, we see that the account is shot through with precepts of how Tahitians should behave in various circumstances and what punishments they are to expect if they fail to behave properly. The accounts of Captain Cook and other early visitors tell of many incidents in the lives of the Tahitians which show that they really tried to live in accordance with the precepts laid down in this and other
myths. When, for instance, an important religious ceremony was performed, the people did have to forego most ordinary activities just as the myth specifies. Food could not be cooked or eaten, fires could not even be lit. On certain great occasions the priests did even command the wind to be still. People were forbidden to bathe at such ceremonial times. The gods punished infractions of this or any of the many other prohibitions in force on these occasions by causing the death of the offender through illness or some unlucky accident.

The early part of the myth we are considering, which describes the stringent restrictions put on the people and the misdeed and death of the girl Tere-he, is thus seen to be a straightforward exposition of the limitations the gods expect people to put on their activities during times of religious ceremonies and a warning of the fate that will overtake the transgressor. By setting the first instance of such an offense back in the misty regions of mythological time when even human beings had miraculous godlike powers, and by showing that even then there was no escape for the human being who flouted the edicts of the gods, this myth impressed upon all Tahitians of Cook's day the utter impossibility of surviving a violation of important religious prohibitions. Many cases have been reported by European observers of Polynesians who died within a few days after becoming aware that they had unwittingly committed some serious ritual offense such as eating the remains of an ariki's meal or walking over the grave of some great chief. Such Polynesians, after announcing that their deaths were imminent because of their offenses, have been examined by European physicians who found no traces of organic disease. Nevertheless, the offenders quickly wasted away and died.

Another point that is merely mentioned in passing in the myth, showing that it was unquestionably accepted in the Polynesian view of the world, was that when Tere-he's people and their land drifted away over the ocean (they were all being punished for her offense which is also in accordance with Polynesian views), the gods paid no heed to them. Evidence from a variety of other sources shows that the Polynesians believed in a definite organization of the relations between the gods and man. As long as man did homage to his gods and lived in accordance with their requirements as detailed in myths, the gods manifested friendly interest in man, actively helped him to achieve socially useful goals and protected him from the baleful beings of the underworld who sought to injure and kill human beings whenever possible. But if an individual or a group failed to honor the gods they withdrew their support and patronage, leaving man impotent to achieve his purposes and a prey to the spiteful whims of the malevolent
beings. This was the sad predicament of the people who floated away on the land that became the island of Tahiti.

The feeling of insecurity the myth attributes to the godless inhabitants of Tahiti-Manahune and their inability to anchor their island securely until they acquired the divinely inspired adz, and their helplessness when the "gods" descended from Havai'i to make war upon them, all drive home the deep-seated Polynesian belief that any man, however great his skills and strength, is powerless and ineffective unless he also has the active support of the gods. Thus the myth of the creation of Tahiti, when we consider it from the point of view of its role in the lives of the people who told it, gives us penetrating insights into some of the most important beliefs that motivated the Tahitian people at the time of their first contact with Europeans. The myths of all peoples can be studied from this point of view, and all such studies, in conjunction with keen observation of the daily life of the people, will yield increased understanding of their view of the world and of the reasons for their particular reactions to various social situations. Such understanding will bring the realization that the behavior of alien peoples is not strange and unpredictable and purposeless. On the contrary most aboriginal peoples will be found to act with great consistency within the frame of reference by which they live.

The story of creation we have been discussing was the developed form of Tahitian mythology, which had "official" sanction when the Europeans arrived on the scene. Another creation myth, known in Tahiti, is probably of earlier origin—at least it was widespread in other parts of Polynesia where the above version was unknown. Ta'aroa, in this second myth, was no more powerful than such beings as Tane, Tu, Ro'o. In this version these gods were all brothers and were the sons born in the primeval darkness to Atea (Space), who was the father, and Papa (Earth-founding) who was the mother. In this earlier mythology Tane was ruler over the forest and its products and over craftsmanship and was the most powerful of the creator beings. It was he who molded the first female of earth and of her begot the first human beings. Tane's brother Tu was god of war, Ro'o of peace and agriculture, Ta'aroa of the sea and its denizens, fishing, etc. This was the mythological structure that had been developed in Tahiti when the early Polynesian explorers went from there to such far-flung places as New Zealand and the Hawaiian Islands. The older form of mythology remained the basic truth in those distant lands.

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6 But not in western Polynesia. There the people developed a mythology quite different from the one we have been considering. This booklet is not long enough to do justice to both sets of tales, so I have confined myself to the one that was accepted by the large majority of Polynesians.
Buck suspects that Ta’aroa became supreme in Tahiti because a group of priests (or a chiefly family) who claimed him as a direct ancestor became powerful and used this means of extolling their own family line. At any rate, Ta’aroa was accepted as supreme in the hierarchy of the gods only in the Tahitian Islands, part of the Cook group, the Tuamotu and Mangareva. (It is to be noted that a system of rank obtained among the gods as among men; another point where mythology gave authority to the social order.) Curiously, Tangaloa was the only one of the great gods of central Polynesia that occurred in the west, and there, too, he was the supreme creator god.

At a still later date the priests of Opoa, after Ta’aroa had long been established by them as the supreme god, invented a son of Ta’aroa named ‘Oro whereupon the father was retired and the son took his place at the head of the divine hierarchy. This was apparently shortly before the coming of the Europeans. ‘Oro was unknown in the outer islands of Polynesia.

Many of the creator gods of the Polynesian pantheon may really have been the deified leaders of the early Polynesian explorations. Man’s genealogical connection with the gods would then be true in fact as well as in myth. Other gods were the personifications of natural phenomena and philosophical concepts, such as Atea or Rangi (Space), Papa (Earth-foundation), Te Tumu (Source, Cause), and Fa’ahotu (To-begin-to-form). Still others were the personifications of events such as the maid Tere-he. These latter two types of god names may be regarded as mnemonic aids or literary devices by which the Polynesian priests unified a variety of philosophical concepts into similar form as proper names. They could then easily be remembered and recited in the genealogical series along with the names of the gods and human ancestors; but in addition, the personification names were keys, for the learned men, to the whole body of Polynesian natural philosophy.

THE GREAT PERIOD OF COLONIZATION

Besides the deified ancestors who were made into the great gods by the priests, other great men have been remembered in legend as the thoroughly human leaders of early explorations from Tahiti into other parts of Polynesia. Varying degrees of supernatural power, one form of mana, are attributed to these individuals, but so was it also to ariki, priests and men of high rank generally, right down to the time when the Europeans destroyed the old way of life. The ancients were commonly accredited with greater power to work miracles and more direct dealings with the supernaturals than any men since them. This should not surprise us for
we have only to look to the legends of our own culture heroes to see that the same is held to have been true of them.

One of the greatest of Tahitian explorers, according to legend, was Rata. He was born in north Tahiti after lands to the east were known and populated. His mother's brother was head chief of the district. The chief's daughter had married a chief from this eastern land and had gone there to live with him. Rata's uncle became lonesome for his daughter so he built a voyaging ship, left his brother to rule as regent and sailed for the east. He encountered several hazards on the way, some of which later storytellers personified as Pu'a-tu-tahi, Isolated-coral-rock; 'Are-mata-roroa, Long-wave; 'Are-mata-popoto, Short-wave . . . Pahu-nui-api-ta'a-i-te-ra'i, Giant-tridacna-opening-on-the-horizon. Since he had properly performed his religious rites he was saved from all these perils except the last. Unfortunately, he came upon Giant-tridacna during a dark, cloudy night (night was always a time of misfortune and ill omen to the Polynesians) and the giant clam swallowed the whole ship and crew.

The gods informed the people of Tahiti of the disaster. The regent set out to recover the bones of his brother but unhappily he and his crew were also devoured by Giant-tridacna. The other three brothers of the chief tried to take revenge on the tridacna but they, too, were lost in the great maw. The deaths of all these men exhausted the main line of the chiefly family and so the boy, Rata, a sister's son, became chief. (Here we see one of the principles of Polynesian social organization embodied in a myth.) His mother served as regent during his minority.

Rata grew to be a huge man of great strength and was very impulsive, quick in anger and a man of action. (These traits are a statement, in legend, of Polynesian ideals of manhood.) When he had become chief in his own right he in turn decided to avenge the death of his uncles and recover their bones. His shipbuilders told him that all the lowland trees suitable for shipbuilding had already been used, that one would have to be found in the highlands. Rata, impatient as always, went alone to the uplands, found a suitable tree and chopped it down without performing the necessary ritual of asking Tane's permission. When Rata returned to the site the next morning the tree was again upright and showed no scar or blemish. (Here, again, is a reiteration of a fundamental Polynesian principle of life: no man can attain his goals without the permission and aid of the gods.) Rata again cut it down, again returned to find it growing as when he had first entered the forest. He felled the tree a third time, then hid in the bush to see what would happen. Very soon a host of forest elves came and began putting the tree back together. When Rata confronted them they told him he had no right to the tree because he had
not obtained Tane's permission. Rata, now contrite, returned home to get the thing done properly. The fairies, roused to sympathy by his change of heart, felled the tree again and fashioned it into a magnificent canoe, all in a night, and wafting it over the trees to the sea brought it to anchor before Rata's house.

Possessed of such a magic ship as this, Rata's success was practically assured. He made the proper sacrifices to the gods of land and sea, having apparently by now learned the necessity of having them on his side (another lesson implicit in the legend of Rata), and sailed uneventfully past the first seven dangers of the sea. They came to the Giant-tridacna in good time and all the warriors gathered in the bow of the ship. Just as it sailed over the lower lip of the great shellfish, with the upper half of the shell hanging over the ship and ready to crunch closed upon it, the warriors all plunged their spears toward the hinge and succeeded in severing the muscle completely so the tridacna stood there gaping, unable to close upon them. Rata recovered the bones of those who had gone before and also pried the Giant-tridacna from its ledge and sent it gurgling to the bottom of the sea. Later he destroyed five of the other seven dangers of the sea. Long-wave and Short-wave still remain as essential tests of navigators' seamanship. Thus Rata made travel into the eastern seas safe for future navigators.

The voyages of Rata and those who preceded him to the east may have been among the earliest explorations from Tahiti. The Tuamotu chain of atolls are close to Tahiti and lead by easy stages to the Marquesas and Mangareva. These seas are dangerous, though, for they abound in barely submerged coral reefs. Rata's feats of destroying dangers of the sea such as isolated coral rock may refer to his having discovered safe courses to the eastern Tuamotu which other navigators thereafter followed.

Polynesian navigation reached its peak with the probings outward from Tahiti by great leaders like Rata and the other chieftain sailors who continued the daring explorations until they had found the islands at the far-flung corners of the huge Polynesian triangle. One legend tells of a chief who sailed his ship so far south that he encountered the ice fields of the polar seas. Doubt has been cast on the authenticity of this tradition, however, and it has been suggested that this element was woven into the legends after the Polynesians had heard of the southern seas from whalers. Once again, as in the case of the myth describing the creation of Tahiti, we have no adequate basis for deciding upon the historical value of this tale.

On the firmer bases of cultural similarity and genealogical correspondence, however, we do know something about the order of discovery of
the various island groups. In some cases we can even make reasonable estimates of the dates of discovery and colonization. The Marquesas, for instance, must have been found fairly early in the great period of discovery and colonization. We say this partly because it is evident that Mangareva was colonized from the Marquesas, so nearly does Mangarevan culture resemble the Marquesan. Moreover, on similar grounds, it seems likely that Easter Island was colonized at a still later date from Mangareva. Hawaii may also have been discovered by Marquesans. Certainly in later days canoes voyaging between Tahiti and Hawaii often went by way of the Marquesas. But Hawaii was colonized primarily by Tahitians, as is shown both by legendary history and by genealogical comparison. In the later days of interisland travel many canoes from Tahiti took the route through the Line Islands to Hawaii and this may have been the route of discovery.

It may have been Marquesans also who sailed due east clear to the coast of Peru. If so, the voyage must have been made at an early date, for there is no legend of exploration that can be interpreted as recording such a voyage. But then, many important events in Polynesian history find no place in the legends of the people. The main reasons for arguing that such a voyage did occur at some time or other is the presence in Polynesia of the sweet potato and the presence in South America of the calabash. The sweet potato is apparently native only to the Western Hemisphere and was an important food crop in Peru when the Spanish conquered the Incas. It must have been transported to Polynesia by boat but no American Indians had seagoing ships that were capable of such passages as the voyage to Polynesia. It must have been obtained from Peru because the name for the plant among the Indians there is *kumar* while the universal Polynesian name is *kumara*. The calabash, on the other hand, is native to Asia and apparently could have reached South America only via a voyage from Polynesia. But 4,000 miles of open ocean lie between Peru and the Marquesas, the likeliest place from which a voyage to South America may have embarked. Because of this great distance many anthropologists refuse to believe that even the Polynesians could have made the trip. They suggest that the Spanish, who were in the South Seas during the sixteenth century, brought the sweet potato to Polynesia and that by the time the French and English arrived, nearly a hundred years later, it had been carried by the Polynesians to such distant places as Hawaii, Tahiti, and New Zealand. Those who favor the theory that

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6 The suggestion has recently been made that the Polynesian sweet potato may be derived from an Asiatic plant rather than from the South American sweet potato. If botanists confirm this suggestion the theory of Polynesian contacts with South America will be greatly weakened.
the Polynesians themselves reached Peru some time in the misty past with
the calabash and brought the sweet potato back with them use several lines
of argument. In the first place, during the great expansion period when
navigators found all the islands in the Polynesian triangle, there must have
been some seeking for even more distant new lands. Probably many canoes
sailed on east. Presumably most of them were lost—the sea must have
claimed many a Polynesian exploring party. But it is certainly within the
realm of possibility, since 2,500-mile voyages within Polynesia were not
uncommon, that at least one ship reached the New World. The return
voyage to Polynesia would have been comparatively easy because the
easterly trade winds are pretty constant in the southeastern Pacific. Other
arguments used in favor of the ancient acquisition of the sweet potato by
Polynesians are the facts that it had been acclimated over the wide reaches
from Hawaii to New Zealand when the English and French reached
Polynesia, plus the fact that so many varieties had been developed—over
a hundred were recognized and individually named in some island groups.
It is argued on the basis of legendary accounts and genealogical records
that the sweet potato was known in Hawaii by 1250 and in New Zealand
certainly by 1350. None of these arguments is conclusive, but their total
weight seems to favor the hypothesis that at least one Polynesian ship
reached Peru and returned with the sweet potato.

Island groups near Tahiti, the Cooks, Australs, Tongareva, the Tuamotu
and Marquesas had certainly been discovered and colonized by A. D. 1000
and some of them perhaps far earlier. Hawaii, New Zealand, and Easter
Island were presumably discovered somewhat later than the near islands.
Extensive colonization of New Zealand is supposed to have occurred about
A. D. 1350, but Hawaii was well populated before that time. These dates
are conservative estimates based on the verbal genealogical accounts.
Polynesia may have been settled at a much earlier date. Tonga and Samoa
had been settled long before the outlying islands, perhaps even before
Tahiti, but their main ties were with each other, with Fiji and westward
along the fringe of Melanesia rather than to the east, and they took no
part in exploring the other corners of Polynesia.

For some time after these far-flung colonies of Tahiti were established
in eastern Polynesia the colonists continued to regard Havai‘i in the
Society group as the homeland and fountainhead of Polynesian theology.
Representatives came from the various islands to the famed parent marae
of Taputapu-atea in the Opoa district of Havai‘i to renew their relations
with the great gods. Finally, at one of these great religious festivals
dissension led to open battle and two high priests were killed. This clash
terminated the religious dependence of the distant islands on Havai‘i and
led to the eventual breaking off of the long voyages between island groups. The lack of intercommunication between the island groups accelerated the cultural differentiation which had already occurred owing to Polynesian inventiveness and also to the distinctive natural environments the various colonists had encountered in the new lands they settled.

The Maori of New Zealand, for instance, developed wooden houses to meet the needs imposed by the cool climate. This change from the thatch houses of other Polynesian peoples offered the New Zealanders opportunities for decorative wood carving and painting on the flat surfaces of house walls, and the presence of jadeite, not found elsewhere in Polynesia, from which the Maori made cutting tools nearly as sharp as steel, led them to produce a wood-carving art that ranks with the world’s best and is not approached elsewhere in Polynesia. The exceptionally large trees of New Zealand enabled the Maori to build such wide seagoing canoes that they could dispense with outriggers which other Polynesians had to retain. The cold climate both inhibited the growth of the paper mulberry from which other Polynesians made their bark-cloth clothes and forced the Maori to develop a complex finger-weaving technique by which they made cloth from the fibers of a native flax plant. The climate also prevented the growth of most Polynesian food plants, made the Maori largely dependent on the imported sweet potato, and also forced them to labor much harder than other Polynesians to produce crops. The uncertainties of Maori agriculture led the New Zealanders to call on the gods for assistance and thus to build up an extensive ritual around agricultural practices which was unnecessary elsewhere in Polynesia.

Easter Island, too, presented unique environmental problems which caused the colonists to deviate from the life ways of their forefathers. Rainfall is so scanty on Rapa-nui that it is almost treeless. This made the construction of seagoing canoes impossible and led the people to look landward much more than other Polynesians. The lack of wood also encouraged the utilization of the soft volcanic rock as supports for the thatch houses and for the carving of religious images. Wood was commonly used for these purposes elsewhere in Polynesia, but large stone images were also chiseled out on some other islands. The people developed a unique ceremonial mnemonic device consisting of pictorial elements carved on small bits of wood. These were probably comparable in use with the knotted strings or notched sticks used elsewhere in Polynesia. There is no basis for assuming that the pictorial elements of the Easter Island tablets ever constituted a written language.

The aridity of the land and the inaccessibility of deep-sea fishes limited the food supply and contributed to a general cultural impoverishment of
the Easter Islanders. Then, too, the Spaniards early transported many Easter Islanders into slavery and sadly disrupted the culture of the remainder. By the time scholars became interested in studying the social life of the Easter Islanders, therefore, only a tattered remnant of the old way of life was left. This poor culture seemed so at variance with that of a people who could carve the large stone statues or produce and understand the boards of “hieroglyphic” memory aids that romanticists and popular writers concocted many weird and wonderful theories to account for the “mystery of Easter Island.” One of these is the suggestion that Easter Island was once populated by a colony from South America. This ignores the fact that no people in South America had seagoing ships or stone statues and hieroglyphic symbols similar to those found on Easter Island. Another suggestion has been that Easter Island is the last above-water mountain top of a submerged continent on which once flourished a highly civilized people. Oceanographers have sounded these seas and find no trace of a submerged land mass. All the works on Easter Island were made by the Polynesian peoples who were its only pre-European inhabitants. Environmental factors and the isolation of Easter Island led to certain unique developments as it did in New Zealand and elsewhere. These factors plus the cultural destruction resulting from the disastrous early contact with Europeans sufficiently account for the disparity between the present life ways of the Easter Islanders and the life of the days when the stone statues were carved and the mnemonic tablets were meaningful. It is forever too late to learn much about aboriginal life on Easter Island.

POLYNESIAN WAYS OF LIFE

Many of the details of life on other Polynesian islands have also gone unrecorded, for their European conquerors were often interested only in changing the old ways of life, and saw nothing worthy even of record in the Polynesian customs they were destroying. For New Zealand, however, partly because some of the first white men were wiser and had broader human interests than those who subjugated other Polynesian islands, partly because the Maori population was large and some tribes maintained most of their customary ways of life for many years after the coming of the Europeans, we have a better record of aboriginal life than for any other Polynesian people. To give an insight into the organization of Polynesian daily life I shall, therefore, have most to say about the Maori of New Zealand, but will compare other Polynesian societies with them at numerous points.

The Maori lived, in pre-European times, in villages of several hundred, sometimes a thousand or more, inhabitants. The interior of New Zealand,
Upper: A village in the interior of the island of Hawaii, about 1770. The thatched houses with square corners and roofs extending to the ground were characteristic of aboriginal Hawaii. From Cook’s Voyages.

Lower: On the outskirts of a Samoan village, about 1900. Excellent footpaths such as this interlace many of the islands and supply the only means of land transportation since there are no wheeled vehicles. Courtesy National Archives.
Plate 10

Upper: Night dance by Tongan women. Note bamboo tubes of various lengths which give different musical tones when struck on the ground. They are used to produce rhythmic accompaniments for dancing and singing.

Lower: The *kava*-drinking ceremony at a formal meeting of Tongan chiefs. This mildly stimulating beverage is made by steeping the crushed or chewed root of the pepper plant in water. Both pictures from Cook's Voyages.
Plate 11

Upper: A human sacrifice to the gods at a marae, or place of worship, Tahiti, about 1770. Note the sacrificial pigs and dogs that have already been put on the offertory platform.

Lower: The body of a chief being preserved by drying in Tahiti, about 1770. The masked figure is the chief mourner. Both pictures from Cook's Voyages.
Upper: Night dance by Tongan women. Note bamboo tubes of various lengths which give different musical tones when struck on the ground. They are used to produce rhythmic accompaniments for dancing and singing.

Lower: The kava-drinking ceremony at a formal meeting of Tongan chiefs. This mildly stimulating beverage is made by steeping the crushed or chewed root of the pepper plant in water. Both pictures from Cook's Voyages.

Upper: A human sacrifice to the gods at a marae, or place of worship, Tahiti, about 1770. Note the sacrificial pigs and dogs that have already been put on the offertory platform.

Lower: The body of a chief being preserved by drying in Tahiti, about 1770. The masked figure is the chief mourner. Both pictures from Cook's Voyages.
Plate 12

Upper: A Maori war canoe carved from a single kauri pine trunk with additional planks affixed to the gunwales to give it greater freeboard. The intricately carved wooden bow and stern pieces could be removed to convert the craft into a deep-sea fishing canoe.

Lower: Part of a Tahitian war fleet gathering for a naval battle. About 1770. Both pictures from Cook’s Voyages.
the only continental land mass in Polynesia, was nearly as heavily populated as the coastal regions. The North Island was more densely populated than the colder South Island. Maori villages were located near the planted fields, usually on the banks of running streams and if possible on or near local land eminences. The village or the nearby eminence was strongly fortified with log stockades and dry moats. Often the people lived in temporary houses among their fields during the growing season, and retreated inside the stockade only when expecting an attack.

Dwelling habits and defensive arrangements resembling those of the Maori were characteristic of other islands in southeastern Polynesia where the people had not developed large political units. Examples are Rarotonga, Mangareva, Rapa, and the Marquesas. In the latter islands, however, the village life was not so much in evidence. Each island of this group is split into several isolated valleys by high mountain ridges. The people of each valley regarded themselves as a friendly unit and their houses were scattered the full length of the valley. In Tahiti, too, the people of each political district lived scattered among their fields although the interior was not populous as in New Zealand. There were villages, unfortified in ordinary times, in Samoa and Tonga and in the kingdom of Hawaii. Dwellers in the atolls, as among the Tuamotu, lived in unfortified villages.

In New Zealand and in many other parts of Polynesia the villages were made up of a number of interrelated family groups. While the Polynesians all recognized what is called the elementary family of husband, wife, and children, this unit was not as important a group to them as it is with us. The usual residence unit was an extended family, all of whose members contributed to and shared in the general store of economic goods. This was a lineage group commonly consisting of an aged man and his wife, their adult sons and daughters, their spouses, and the children of these second-generation marriages. Sometimes the several couples and their children all lived under one roof, sometimes they lived in several houses clustered close together and a little way apart from the houses of other families. Such a family group had the exclusive rights to the products of specific areas of land: fields for crop raising; forest for bird snaring, rat trapping, or other use; fishing sites; and so on. Sometimes one family had the rights to certain products of a given piece of land while another family had the rights to other products of the same piece of land. Ordinarily sons stayed in their fathers' households and brought their wives there while daughters left the family home to go with their husbands.

In these large households some one person was the acknowledged leader and disciplinarian. This person also was responsible to the public at large for the behavior of the members of his household and he represented it
at village meetings wherein public policy was determined. In most of Polynesia this leader was the oldest man in the household, the patriarch father if he still lived or his eldest son if the father had died. Within each constituent family the eldest son exercised control over the other children, all in accord with Polynesian ideas of the rightful superiority of the first-born child. In some parts of Polynesia, in fact, the first child outranked his own parents and exercised control over them. In Samoa the people have never felt such reverence toward either the first-born or the elderly. There the head of the household is elected from among several eligible adult men and old men are retired from active leadership.

The members of the various households in a Maori village also commonly regarded themselves as related to the members of some or all of the other households in the village. All these people, except those who had married in from the outside or slaves captured in war, were members of the same "clan." That is to say, they all traced their ancestry back, preferably through males, to a common ancestor several generations removed. Here was one of the important functions of the genealogical record keeping so characteristic of the Polynesians. For among the Maori and many other Polynesian groups the rights to use the land were held by the clan and only those who could prove membership in the clan could till the land or use its products. Moreover, various rights and privileges within the clan, as well as duties and obligations, were differentially shared by the various family groups according to the relative genealogical position of each group. Thus if two family groups traced their genealogies back to two brothers, the descendent groups themselves were said to be related to one another as older and younger brothers. The "younger brother" group owed certain duties and deferences to the "older brother" group just as, within an actual family, the older brother enjoyed some exclusive rights and privileges including the right of exacting obedience from his younger siblings. Among the Maori and some other groups tribes were recognized and consisted of the clans that claimed descent from a common ancestor and again the constituent clans were related to one another as older and younger brothers with differential rights and privileges. These facts give us some insight into the great importance of genealogical reckoning in the everyday life of the Polynesian people, and why each person had to have extensive knowledge of his own descent in order to protect his rights.

In order to maintain traditional rights or claim new ones people would sometimes trace alternative lines of descent. Thus while descent traced through males was preferred throughout Polynesia, there would be times when a man could better bolster a given claim by substituting a female
ancestor. For instance, if a man’s grandmother had been the oldest child in her family and his grandfather a younger child in his, the man might gain by tracing his descent through the grandmother’s family. Similar benefits might accrue from tracing descent through a female ancestor if her family group as a whole had been of higher rank than that of her husband. This sort of substitution, and even outright invention, was most extensively used in Samoa where family rights and chief’s titles did not go automatically from father to eldest son and where, consequently, the relative rank of the different titles was not clear-cut as it was elsewhere in Polynesia. A Samoan chief could greatly enhance the prestige of his title if he were lavish enough in his presents to the talking chiefs who were the political “bosses,” for then the talking chiefs would slowly rearrange the genealogies of the various chiefs so that the title of the generous one eventually gained preeminence over the others.

But, as I have said, the preferred reckoning of descent in Polynesia was through men. This is a clue to an important feature of aboriginal village life, the sharp division between the social roles of men and women. This dichotomy was most marked, perhaps, among the Maori of New Zealand where it was evident in all phases of social behavior from economic activities to religious observances. It was supported by the whole body of Maori religious philosophy and mythology which is intensely interesting but too lengthy for more than a skeletal presentation here. Briefly, the Maori believed in a Supreme Being, Io,7 who created the male Rangi, the sky, and the female Papa, the earth, out of the primordial chaos. These beings begot some 70 children, all males, the most important of whom were Tane, Tangaroa, Rongo, Tu, and Whiro. Tane and the majority of the brothers finally wearied of living in the darkness and regardless of the objections of Whiro they pushed the Sky-father up away from the Earth-mother so that light shown on the world. Whiro thereupon retired to the dark, cold underworld, and from then right to the present day has waged ceaseless war on his brothers, the creator gods, seeking to undo and destroy their works. The similarities between this and the Tahitian myth of creation, described on page 31, will be seen. But in New Zealand Tangaroa was not as important as he was in Tahiti, being merely god of the sea and its denizens. Rongo, the god of agriculture, was important in this colder land where agriculture was hazardous. Tu was the god of war. Tane was the great creator god of the Maori. The natural species of the land, particularly of the forests, were created by the sexual activities of

7 Some scholars believe that Io is a post-European invention put at the top of the Maori pantheon by native philosophers in imitation of the single supreme God of the Christians.
Tane. In his effort to create man, a mortal race in the image of the gods, he cohabited with numerous varieties of birds and insects, causing them to reproduce their kind. Finally he and his brothers (excepting Whiro) molded the form of a woman from earth and Tane breathed the breath of life into her, then took her to wife and produced a daughter with whom he later committed incest to produce the first human beings.

In harmony with this creation myth the Maori held that men, who were like the gods in physical form, also had some of their creative powers; while women, who were like the Earth-formed-maid physically, were, like her, earthy and without godlike powers. In procreation, said the Maori, the father contributed the immortal godlike spirit while the mother contributed the mortal earthy body. Moreover, Tane's daughter, the mother of the whole human race, had fled to the underworld, Whiro's stronghold, when she discovered that her husband was also her father. For these reasons women, in the Maori view of the world, had some taint of an association with Whiro, death and the underworld. Since Whiro was opposed to any creation of social goods, women, associated with him as they were, had to absent themselves when men were exercising their creative powers to produce a food crop, a new canoe or ceremonial house, etc. If a woman approached the scene of such an activity she would destroy the efficacy of the men's creative powers and doom the enterprise to failure.

This dichotomy of the sexes the Maori greatly ramified into a logically consistent set of attitudes about men and women that defined how individuals should act in almost any social situation. Thus it was only men, by and large, who produced new social goods like food crops from land and sea, houses, canoes, victories in war, etc. Women could work only with things that were "dead." They could prepare food and cook it but they could not enter the main storage pit of sweet potatoes because the seed for next year's crop was also kept there and the entrance of a woman into its presence would have destroyed the spark of life that was to produce the next crop. Conversely, men could not work about the cooking fire nor engage in other "female" activities on pain of losing their inherited ritual mana which would have destroyed their social manhood. Men who were captured in battle were consigned to female work and thus they irrevocably lost their manhood and could never again participate in the creative work of men. Women and male slaves had to inhibit their behavior in various formalized ways to show their respect for the ritual superiority of men.

These remarks, necessarily too brief for full accuracy, must not be taken to mean that Polynesian women were mere drudges without rights or voices in social life. Women often exercised considerable power in family
affairs and also influenced public affairs informally through the counsel they gave their husbands or brothers. Women had control over their own personal property. Women and girls enjoyed great personal freedom before marriage, including the right to have premarital sexual affairs. Even after marriage a woman could leave her husband if he mistreated her. Moreover, if a woman came from a higher-rank family than her husband he could never order her about. The Samoans and Tongans adopted a Fijian custom which gave their women more power than those of any other part of Polynesia. In these two island groups sisters were considered to be of higher rank within the family than brothers. All boys and men thus had to behave in formally respectful ways toward their sisters and the sisters of their fathers. A Samoan or Tongan girl was particularly powerful in her relations with her mother's brother. She could appropriate his food or possessions or demand almost any favor of him. He had to comply with good grace to all these demands.

Maori conceptions of illness were related to their beliefs about the ritual dichotomy of the sexes. Illness was "female" and an indication that the sick person had committed some ritual offense that caused the creator gods to lose interest in him temporarily or permanently and therefore to withdraw their protection from the offender. In such cases the malign Whiro, who was helpless to harm humans as long as the creator gods exerted their protective influence, sought to cause the offender's death by drawing his spirit out of his body into the underworld. This was one of the ways Whiro pursued his everlasting war against his brothers who introduced light and life into the world. The fact that a sick person was under Whiro's influence and out of touch with the creator gods made his predicament somewhat like that of women, generally. This is what I mean when I say that illness, in Maori thinking, was related to the dichotomy of the sexes. The Maori further believed that if healthy people associated with one who was sick, the creator gods would likewise lose interest in them and they, too, would fall prey to Whiro. Consequently, sick people were isolated in special huts and left to die or recover as the gods willed. Menstruating women were treated in similar fashion and for similar reasons. Views of illness like that of the Maori were widespread in Polynesia.

Sorcerers among the Maori also operated within the framework of the Maori ideas of the causes of illness and premature death. When a sorcerer wished to make a man ill or even to kill him, he caused the prospective victim unwittingly to commit a ritual offense. This was easy since many everyday acts could be offensive to the gods if performed in the wrong context. The sorcerer merely arranged a context, unbeknown to his victim, that was suitable to his purpose. Then the gods did the rest and the victim
became ill or even died, just as though he had consciously flouted the gods. Whiro was, of course, the patron deity of sorcerers for he was always eager to destroy the works of the creator gods, including man. It must not be supposed, though, that sorcerers were necessarily hated or regarded as anti-social. For an otherwise undetectable thief could be caught and punished by the sorcerer's methods; also, an individual who had been wronged and was unable for one reason or another to take direct action could get vengeance through a sorcerer's machinations. The fact, too, that Maori sorcerers had their own school of learning and their own tuahu (sacred place, altar) for the performance of their rituals shows that they were accepted as useful members of society. If it had been otherwise, they would not have been permitted to practice their arts openly.

But sorcerers were held to be quite different from other tohungas or priestly experts. This was why they had to have separate schools and separate altars, and why the same man could not be both a sorcerer and a priest. The difference lay in the fact that sorcerers drew their power from Whiro, while the priests drew theirs from Tane, Tangaroa, Rongo, and Tu. Whiro, as we saw above, opposed these other four brother gods who were the great creators. Whiro's efforts were all directed toward the destruction of the creative efforts of the others. Thus the sorcerer, even when he performed such socially useful acts as punishing an undetected thief, was pursuing Whiro's goal of destroying human life. The sorcerer, like women and for the same reason, was consequently ritually incompatible with the activities of other tohungas, those who drew their power from the creative gods, and who led cooperative work groups of men whose goals were the positive enrichment of their people's lives.

A Maori tohunga was not born with his priestly power or mana. He acquired it by spending long years studying in the whare wananga (house of learning). Bright youths, usually of high rank, were sent to such schools to learn the priestly craft. There were three elements in their education. First, they had to become expert in the actual handling of the tools of their chosen craft—canoe building, agriculture, warfare, or whatever it might be. They also had to learn how to lead a group of men, for nearly all constructive activities in Polynesia were performed by cooperative groups. Included in this phase of a tohunga's training were instructions both in the problems of dividing a task among the members of a work group and in the techniques of inspiring men with confidence and enthusiasm for the cooperative task. Oratorical virtuosity was important in the latter connection—in fact, skilled orators have always been highly esteemed throughout Polynesia. The third thing a student priest had to learn was the ritual connected with his craft, the ways to interest the gods in the projects he led and thus to insure their success.
In New Zealand this latter element in a priest’s training was perhaps the most important and the most difficult, for there were hundreds of set rituals associated with each craft. These had to be performed, including the recitations of long ritual formulae, in a certain precise way. If the priest made any sort of an error, even a slip of the tongue, the whole project was doomed to failure and the priest was liable to lose his life through the anger of the gods.

At the other extreme of emphasis were perhaps the Samoans who, in crafts as in politics, played down the roles of the gods and emphasized technological skills and the leadership of men. Samoan craftsmen, such as house builders, were organized into a virtual guild. They demanded rich gifts in return for their work and would unhesitatingly quit when a house was half done if the flow of gifts ceased to satisfy them. The Samoan view of craftwork put it very nearly on a wage basis and a high one at that. The Maori viewed cooperative work in an entirely different light. There men were chosen from various family groups of the clan by the tohunga for a particular cooperative activity, but there were no guilds of specialized workers, although, of course, it was recognized that some men were more skilled than others at a particular sort of work. Moreover, to the Maori, every cooperative undertaking was for the good of the whole clan, they worked for the public and without pay other than prestige and the right to a share in the benefits of their work. In both societies the members of such work groups would probably have said they were working for the chief. But the Samoans would have been thinking of him almost as an employer while to the Maori he was a symbol for the clan, their public.

The relations between “commoners” and chiefs, as suggested by the differential attitudes of workers in Samoa and New Zealand, varied through a wide range in different parts of Polynesia. The common people everywhere acknowledged that they owed duties and obligations to their chiefs. But the quantity and nature of these obligations and also the manner and rigidity of their organization and enforcement varied in different parts of Polynesia. In islands where strong political organization did not extend beyond the village (e.g., New Zealand and the Marquesas) the contributions were irregular. When it was decided to give a feast to the clan that occupied a neighboring village, the chief sent out a call for food, and the various families of his clan vied with one another to see who could contribute the most. Or when a great sailing canoe or a new house of learning was to be built, men counted it a great honor to be asked to participate in the work.

On those islands where political integration had gone to greater lengths, and where social differentiation into chiefly castes and commoners had
occurred, the contributions expected of commoners was much more formalized. In Tonga, Hawaii, and Tahiti for instance, political organizations had developed that by historic times were somewhat similar to the European feudal systems of the Middle Ages. The supreme chief of all the Tongan Islands, the Tui Tonga, was a being so sacred that he was virtually a god on earth. He could not stoop to handling the details of political administration, much less to providing the necessities of life for his family and large circle of retainers. The Tui Tonga was maintained in great splendor as the supreme religious leader of the society. A chief of less exalted rank but still far superior to anyone else in the islands held the reins of actual political leadership. Under him was a hierarchy of lesser chiefs each of whom held traditional rights over a large number of commoners and the products of their toil. Each family of commoners contributed a portion of its income of food and useful articles to the chief as recompense for the privilege of tilling "his" soil. This lesser chief, in turn, paid for the perpetuation of his traditional privileges by passing part of this wealth on to the higher chiefs. A somewhat similar system was in effect in the Society Islands except that there was no chief supreme over the islands in pre-European days.

It must not be supposed that such arrangements as these were to the Polynesian mind either tyrannical or merely political. The chiefs (ariki) were, as I mentioned earlier, the most direct descendants of the creator gods through the line of eldest sons. The productiveness of land and sea, and the efficacy of all human effort for the public good, depended on the good will and cooperation of these gods. The ariki was the only man in the whole society who could intercede for the people with the supreme gods to guarantee the maintenance of their cooperative interest in the general welfare of the society. This was his sacred duty to his people and involved his lifelong observance of many onerous restrictions on his personal behavior in order that he might retain his close social relations with the great gods. It was also the chief's function to serve as the focal point for the éclat of his clan, district, or nation, as the case might be. Festive ceremonies and banquets at which other villages or groups were entertained were given in the chief's name; war canoes or deep-sea sailing vessels, as well as magnificent edifices for the instruction of priests or the entertainment of visitors were built in the chief's name; thus the name of the chief was made to resound to the heavens and in all lands, and the people who could produce and maintain such a chief were themselves great. The assurance of the gods' beneficence and the self-esteem engendered by enhancing the prestige of the chief were sufficient reasons for Polynesian commoners to contribute wholeheartedly to his proper support.
Such satisfactions were probably less powerful in island groups like Tonga, Tahiti, and Hawaii where the integration of larger numbers of people into political units was accompanied by increasingly impersonal and indirect relations between the high chiefs and the common people. The masses could not have felt, in these islands, the identification with their chiefs that was experienced by other Polynesians. This is especially suggested by the "official" creation myth of Tahiti which I have already cited, according to which only the chiefly families were direct descendants of the gods while common people were alleged to have a less illustrious ancestry. This Tahitian myth (p. 26) and the Maori version (p. 42) obviously stem from a common source. But the two versions supported very different sets of customs and, considered in relation to the customs on which they bear in the two societies, they strikingly illustrate how tellers of tales warp and remodel a myth till it fits and gives sanction to the particular ways of life of the society in which it is told. Both the Tahitian and the Maori versions of the creation myth divide the respective societies into two groups, one of which was alleged to be more directly related to the gods than the other and hence superior. In New Zealand the division was between men and women, and women looked up to men as superior beings. Associated with this attitude in New Zealand was the fact of the social division of labor whereby the work assigned to women was largely routine while only men produced new social goods such as canoes, crops, victories in war, etc., which actually enhanced the prestige of the society and increased its means of self-maintenance. In Tahiti it was the people of chiefly rank, both men and women, who claimed direct descent from the gods and formed an upper, self-perpetuating social caste. The commoners of both sexes who, according to the Tahitian myth, were not directly descended from the gods, did the routine drudgery which in New Zealand was assigned to the women. There was not nearly so much stress on a sexual division of labor in Tahiti. Members of the chiefly caste lived in luxury as the economic, political, and religious leaders of the society. In many respects, both in social roles and in ritual status, the social classes of Tahiti and Hawaii corresponded to the dichotomy of the sexes of the Maori.

The social gulf that separated the chiefs and high priests of Tahiti, Tonga, and Hawaii from the commoners is also indicated by the fact that the people in these islands had no political voice. All decisions of national policy were made by the rulers, and the people were simply ordered to contribute food for a feast or men for an army, as the case might be. Such action by a chief would never have been tolerated in the smaller, more democratic societies of such islands as the Marquesas, New Zealand, etc.
In New Zealand, for instance, if a chief wanted to institute an important activity, he called a meeting of the heads of the various household groups in his clan. The matter was placed before them, usually debated by two or more priestly experts, and then the chief proposed a certain line of action. If the group of men then voiced a sound that has been likened to a cough, it was a sign that they agreed to the proposal. If they remained silent the proposed action was vetoed. The chief could not force his wishes on his followers.

In Samoa, although there were high chiefs and each island was an integrated political unit, provisions were made for a species of popular representation. In the first place, the fact that titles and such functions as head of a household (matatia) did not descend from father to son but could be passed on to any one of a group of eligible men in the family gave the people a chance to choose their family leaders as well as the more important chiefs. These chiefs had to be chosen from certain family lines, for each family “owned” several titles, but there were usually several candidates for each title. The possession of a title did not give a man any absolute power to govern but entitled him to sit in the public council or fono. Each village had its own fono which dealt with the problems of local government. Its members were the heads of households plus elderly men who had been “retired” from headships but whose counsel was still sought. Each chief had his particular position within the circle in which the fono sat when in session. These seats were ranked in a hierarchy of prestige. Each chief had a talking chief who did his speech making in debates (for a chief’s dignity would suffer if he took part in an argument). The talking chiefs also carried on the “cloakroom” politics by which political deals were made and compromises effected. They had a great deal of unofficial power. Among other things they were able, as I mentioned earlier, to change the relative prestige of the chiefly titles by manipulating genealogical recitals which always opened the sessions of a fono and by favoring the proposals of a given chief in their speeches. By these activities they might raise a man with an insignificant title to a position of high prestige in the fono or vice versa.

Besides this fono of “big men” each village had other fono-like organizations whose duties were administrative rather than legislative. The most important of these was composed of the young men who had not yet acquired titles and older untitled men. This group carried out the edicts of the fono, and their duties ranged from the punishment of offenders against the social order to cleaning out the village guest house when there were plans to entertain outsiders. The wives of the fono members also had a similar organization, as did the young girls of the village, and each group had certain tasks and functions to perform.
A district of several villages had a district *fono* whose members were the few men holding the highest titles in each of the constituent villages. Above this was a *fono* for a whole island, made up of the top few men from each district. Each of these *fonos* promulgated “laws” applying to the people it represented, and the various members took word of its actions back to the more localized *fonos*. In theory there was a “great *fono*” for the whole Samoan group of islands and the men accredited to sit in this body had the titles of highest prestige in all the islands. But this body has not met within the memory of man.

This Samoan system of self-government has proved the most adaptable of all Polynesian political systems, for it still flourishes today in essentially its traditional form, whereas all the systems based on lineal inheritance of chiefly powers have been destroyed or greatly modified under the influence of European and American overlords. One reason for this is probably the fact that the Samoan system allows for such wide political participation. Interest in politics and political representation is thus spread widely through the society, and most men can hope to win a title with its bit of power and prestige or at least to help “make a king.” Another contributing factor to the durability of the Samoan political structure is the fact that it has always been largely divorced from the religious life of the people. Elsewhere in Polynesia where, as we have seen, the *ariki* was by birth the spokesman for his people with the gods, the political systems largely collapsed when unbelieving Europeans violated the sanctity of chiefs without harm to themselves and when the missionaries killed the old gods and substituted another, thereby nullifying the chiefs’ primary claims on their peoples. Such peoples, deprived of nearly all traditional leadership and of most of their supreme values of life, were plunged into a social chaos from which many have never emerged. But the Samoans were able to exchange their gods for a new one without particularly disrupting the rest of the social order.

**THE COMING OF THE EUROPEANS**

Portuguese and Spanish explorers crossed the Pacific several times before the middle of the sixteenth century, but curiously they did not encounter any of the islands of Polynesia. The Marquesas were finally discovered in 1595 by the Spaniard Alvaro Mendaña de Neyra. It is possible that Spanish navigators discovered both Tahiti and the Hawaiian group before 1610 but their references and charts are so vague and inaccurate that we cannot today decide how extensive their discoveries were. The Spanish left a few priests on some of the islands, but they did not succeed in establishing themselves or in changing native life—unless, indeed, the
sweet potato really reached Polynesia via the Spaniards. The Dutch explorer Tasman sighted New Zealand and Tonga in 1642-3, but there was no follow-up of these contacts and his charts were so inaccurate that the two groups had to be rediscovered. Another Dutch navigator, Roggeveen, found Easter Island and Western Samoa in 1722.

The intensive exploitation of Polynesia began with the English exploring party under Wallis and Carteret which sailed in 1766, rediscovered Tahiti, visited Tonga, and found several new islands including Pitcairn and some of the Tuamotu atolls. The Frenchman, Bougainville, was in Tahiti 8 months later but went on via Samoa to make discoveries to the southwest (the largest island in the Solomons is named for him). James Cook shortly followed, sent by the Royal Society to observe the transit of Venus in Tahiti. He surveyed these islands, which he named in honor of the Royal Society, then proceeded to New Zealand and the east coast of Australia both of which he mapped so accurately that few changes have been made in modern charts. Captain Cook made two more voyages, during one of which he wintered in Tonga and discovered the Cook Islands. On his way to seek the "Northwest Passage" in 1778 he encountered the Hawaiian Islands where he was later killed in an altercation with the Hawaiians. Bligh and Vancouver had been with Cook, and each later led expeditions into the South Seas where the famous mutiny occurred aboard Bligh's ship, the Bounty, in 1788.

These exploratory voyages revealed new riches of various kinds to the western world. Whalers learned of the excellent hunting in these seas and of new lands where they could refit and provision their ships amid idyllic surroundings. Traders saw opportunities to make large profits by exchanging iron tools, beads, mirrors, and other manufactured goods for such products as pearls and coconuts that could be sold in the world market. Churchmen saw a chance to gain heavenly glory by converting the Polynesians, destroying their old gods and teaching the people about the stern and repressive Christian God of that time. At a somewhat later date European governments and the young government of the United States began to see imperialistic advantages in bringing these far-flung islands under their sovereignties.

All these newcomers brought immediate tragedy to the Polynesians. The whalers and other sea rovers came first and for a long time had a completely free hand in their dealings with the inhabitants of some of the islands. Many of these men were brutal and lustful, and they ran rampant in these lands whose laws they flouted. Not content with the superb hospitality the Polynesians first offered or with the pleasures that were freely given, they killed and plundered and raped in shameful fashion.
PLATE 13

Reef fishing with a circular throw net. Man at left is ready to cast. Photograph by R. I. Baker. At the right the net has spread to its full diameter. Fish imprisoned when it descends. Photograph by Richard H. Steward, courtesy National Geographic Magazine.
Upper: Samoan women making tapa or bark cloth. The woman at left is beating a fibrous mass of bark with a wooden club to spread and thin it; the one on the right is patching holes made during the beating.

Lower: A Samoan woman decorating a piece of tapa by freehand painting with native dyes. Both photographs by Paramount-Flaherty Expedition, courtesy National Geographic Magazine.
Plate 15

Upper: Maori women weaving while men spar with clubs in background.

Lower: Maori woodcarver at work. New Zealand Government photographs, courtesy Australian News and Information Bureau.
Plate 14

Upper: Samoan women making *tapa* or bark cloth. The woman at left is beating a fibrous mass of bark with a wooden club to spread and thin it; the one on the right is patching holes made during the beating.

Lower: A Samoan woman decorating a piece of *tapa* by freehand painting with native dyes. Both photographs by Paramount-Flaherty Expedition, courtesy National Geographic Magazine.

Plate 15

Upper: Maori women weaving while men spar with clubs in background.

Lower: Maori woodcarver at work. New Zealand Government photographs, courtesy Australian News and Information Bureau.
Plate 16

Upper: A modern taro plantation in Hawaii. Poi, a dish made from taro, is still very popular in Hawaii. Photograph by R. A. Young, courtesy Bureau of Plant Industry, United States Department of Agriculture.

Lower: A taro patch on an atoll island. This variety of taro will grow only under water. It is therefore planted in pits that extend below the ground water level. Photograph by K. P. Emory, courtesy Bishop Museum.
But far worse than these violences were the diseases these men bequeathed the islands. Before the coming of the Europeans, ailments such as colds, dysentery, influenza, or measles were virtually unknown in Polynesia, and consequently the natives had no immunity to them. What to the Europeans were mild sicknesses became to the Polynesians raging scourges. Tuberculosis and smallpox seized upon the unfortunate natives with unprecedented virulence. In several instances as many as a third of the inhabitants died in the epidemic that swept through an island after a ship had stopped to pick up fresh fruit and water. As late as 1875 a measles epidemic killed 40,000 Fijians, 28 percent of the total population of that time.

The missionaries who began to arrive in the last decade of the eighteenth century were sincere in their desire to help the Polynesians. They valiantly, but often ineffectually, opposed the abuses of the crews of ships that called, and of the beachcombers, escaped convicts, and other drifters who had already begun to prey upon many Polynesian communities. The Polynesians had from the first been struck with the apparent superior power of the Christian God. They observed that Christians with impunity violated Polynesian rules of behavior which had theretofore been thought to carry the penalty of automatic and certain death. They observed, too, that Christians had bigger and more seaworthy ships than theirs, deadly firearms and wonderful iron tools. All such things, in Polynesian thought, were ultimately gifts of the gods. So the Polynesians were inclined from the first, according to well-established custom, to assign to the new and powerful *atiu* (supernatural being) a high place in their pantheon.

But this was not satisfactory, of course, to the missionaries who, as soon as they were well established on the various islands, insisted upon the destruction of all heathen temples and the discontinuance of all protestations to heathen gods. They required, moreover, that their newly won flocks give up many customs dear to their hearts and not demonstrably incompatible with the worship of the new god. All dancing was banned by the missionaries because some dances were erotic, and also because some of the missionaries regarded all dancing and secular music as immoral. In aboriginal Polynesia the ordinary clothing was a loin cloth for men and a short skirt for women—both sexes went unclothed above the waist. The missionaries, for reasons of "decency," required all converts to go fully clothed. Modern doctors believe that this excessive clothing increased the incidence of tuberculosis among Polynesians. Chiefs, whose polygamous marriages had definite economic as well as religious functions, had to choose one wife and put the others aside. No adequate substitute for the way of life they prohibited was offered by the missionaries to the Polynesians. As a result the missionaries were rejected by part or all the
populace on some of the islands; elsewhere extreme personal and cultural disorganization resulted from the combined effects of the impact of the new and little-understood repressions dictated by the missionaries and the diseases and violence to which the Polynesians were subjected through many of their other contacts with Europeans.

Many factors combined to speed the social disintegration in the ensuing years. The Polynesians were confused from the start, of course, to observe how little uniformity there was in the behavior of the Europeans. The missionaries, they saw, had little control over the carousing sailors and ne'er-do-wells—this was a situation inexplicable to a people whose priests had always been so highly and universally honored. Moreover, the natives accessible to ports quickly acquired guns from the traders and used them to attack their traditional enemies. Tribal wars thereupon changed from comparatively bloodless skirmishes to massacres. It has been estimated that 60,000 Maori were killed in such wars after the introduction of firearms.

And sad to relate, missionaries' hands were not always clean in these affairs. In Tahiti the false assumption had been made by Europeans from Cook's day onward that a chief named Pomare was "king" of that island. The fact is that he was but chief of the district in which the best harbor lay. This chief acquired heady power through his control of the distribution of European goods in the rest of the island, and the other chiefs came to detest him for his despotic use of that power. Pomare, primarily out of greed for the white men's goods, early professed Christianity and delivered up all the "subjects" of his territory to the new creed. The other chiefs, jealous of Pomare and not under the direct influence of the handful of missionaries, spurned the new religion and threatened to raise armies to depose Pomare and drive the missionaries off the island. The missionaries thereupon secured firearms for Pomare and instructed him to wage a "righteous" war on all districts that refused to cast aside their old ways and accept the rule of the missionaries. After a bloody campaign the other districts were conquered and the missionaries, through the figurehead Pomare, imposed their rule on the whole island and obtained the "conversion" of all its inhabitants. Even uglier wars were initiated by the missionaries elsewhere in Polynesia. On one occasion three different churches early established missions in an island group and competed for converts. The competition grew so fierce that finally each mission equipped an army of natives and set them to fighting one another.

As can be imagined, the Polynesians were confused and bitterly disillusioned by interpretations such as these of the "religion of brotherly love." In many areas they set their faces against the new religion even
though their own had become hopelessly inadequate to them when tested against European unbelief. The lack of any organized system of religious beliefs was a profound and tragic source of disorganization in the lives of these Polynesians whose every act had previously been colored by religious considerations. Many of the people became listless and cared not what happened to them. The old goals of life were gone forever, and there were no new ones that had meaning to the Polynesians.

One more heavy blow was to fall when Europeans and Americans began to come to the South Seas in numbers as colonists. This was the land grabbing by which many Polynesians, mostly in New Zealand and Hawaii but to a lesser extent throughout most of the islands, lost all rights to the best of their ancestral lands. The idea of exclusive individual ownership of land and all its resources was alien to the Polynesians as we have seen earlier. There were, consequently, many misunderstandings between them and the European and American colonists who claimed all rights in the choice parcels of land they often acquired for next to nothing. The early colonial governments usually supported the colonists against the natives in cases of dispute and on more than one occasion even participated in fraudulent transfers from natives to immigrants. The net result of all this was that, especially on the larger islands, huge blocks of the best land, including that adjacent to ports, went to the colonists, and the Polynesians had to make shift on what the newcomers did not want.

For a time native groups attempted to fight for the rights they could not get by peaceful means, but these "rebellions" were sternly put down with a further decimation of the Polynesian population. In New Zealand, particularly, the "Maori Wars" were bloody, lasted many years, left the Maori exhausted, and engendered a bitterness on both sides that has only recently been healed. When they finally saw that they were helpless to resist the newcomers' aggressions either peacefully or by force, the Polynesians, bereft of leaders, of life goals, and even of land from which to obtain their livelihood, became stricken, as F. M. Keesing has put it, with the numbness of maladjustment and a sense of cultural inadequacy.

Because of this listlessness, and the sanguinary wars and devastating diseases that appeared with the white men, the Polynesians declined rapidly in numbers until most observers thought they would soon become extinct. From an estimated total of 1,100,000 men, women, and children who inhabited Polynesia when the Europeans came, the numbers of natives dropped rapidly until by 1900 there were only about 180,000 left. In Hawaii the native population decreased from an aboriginal total of about 200,000 to around 40,000 by 1900. The Maori reached a similar low at the turn of the century. The Marquesans, most shattered of all Polynesian
groups, continued to decrease until there were only 2,000 of them in 1926 and all observers thought the last Marquesan would be dead in a few years.

But they have begun to increase slowly and numbered 2,400 in 1936. Throughout the rest of Polynesia a recovery in numbers began shortly after 1900 and by 1938 the total census figures showed a population of 330,000 "persons of Polynesian ancestry," including part-Polynesians. The increase is occurring in nearly all the island groups and will apparently continue for some years to come, perhaps even accelerate, for the proportion of young people is increasing in all Polynesian groups. The proportion of part-Polynesians is rapidly increasing on many islands where they will probably soon outnumber the full-blooded natives.

No one knows precisely what happened to turn the tide, but several factors probably contributed. Of direct benefit to the Polynesians has been the improvement of control over the introduced diseases which has resulted in a much lower death rate. The natives are acquiring a degree of immunity to many of these diseases and the introduction of modern medical and hygienic practices into the islands has also been a great help, though much remains to be done along this line. The elimination of native warfare and some other aboriginal customs, such as occasional human sacrifice and infanticide have been cited as causes of modern population increase but the positive effects of such measures has been infinitesimal as compared with the generally injurious effects on Polynesian life and health of the European influx.

An important indirect factor has been the change of heart toward the native peoples which has been apparent for the last 50 or more years on the part of the governments of the United States and the European countries that have established dominion over the various island groups. Native land claims came to be recognized and admitted to the courts and, while apparently the alien holders will maintain their claims on the best and most accessible land, still the Polynesian peoples have been recovering some of their ancestral holdings. The various governments have forbidden the further alienation of native lands in many of the smaller island groups and discourage further colonization. These belated rectifications of ancient wrongs have undoubtedly helped the Polynesians to recover from the hundred years of despair into which they were plunged after the arrival of the Europeans and Americans.

Another reason for the Polynesians' recovery of the "will to live" has been their partial success in reorganizing a satisfactory way of life by preserving some of the old ways and incorporating some of the new. Some present-day government officials and missionaries, more sympathetic toward
Polynesian social values and needs than officials of earlier days, are actively helping the natives toward the achievement of this synthesis and the rebuilding of a life that is satisfying to the Polynesians.

LIFE IN POLYNESIA TODAY

Fortunately the ancient Polynesian form of family life was not greatly disturbed by the results of European contact. The extended patrilineal family characteristic of Polynesia closely resembled the Biblical variety. The only important organizational change it has suffered as a result of alien pressure has been the elimination of polygamy, which was largely a chiefly prerogative in the old days, so that even this change has not directly affected the family life of most Polynesians. Today as in the olden days authority rests, in Polynesian families, in the elders, particularly in the eldest male. Important decisions affecting the whole extended family of several couples and their children are still made after thorough discussion in family councils. Divisions of labor within the family still follow the ancient allocations by age and sex. The Polynesians have clung to many family customs, in fact, in the face of both missionary and government disapproval. Examples are the sexual freedom of both boys and girls before marriage, the restrictions on the social behavior of women during menstrual periods, the continued prevalence of adopting children from one family to another, and in western Polynesia the avoidance of direct social relations between brothers and sisters. The basic relationships between family members are still characteristically Polynesian.

The special relationships between more distant kindred that characterized ancient Polynesia have also been largely maintained, though not to the extent of the immediate family ties. In the old days when strangers were objects of suspicion and hostilities smouldered even between neighboring villages, nearly all intervillage visiting and cooperation were based on kinship ties. The aboriginal Polynesian's contact with the world outside his own village was limited to those localities where dwelt people whom he recognized as relatives. Such relatives were sometimes economically important, as when the products of one village were traded for different products of another village. They were politically important as the basis of intervillage alliances for war or peace. Sometimes villages played complementary parts in important religious ceremonies. Nowadays such intervillage contacts do not depend so much on the maintenance of kinship ties because people move about more freely with no fear of overt attack and less fear of sorcery at the hands of strangers than in aboriginal days. But nevertheless the old pattern of making contacts with outside villages
through relatives living in such villages persists so that even today there is a great deal of work and gift exchange and ceremonial visiting between kin living in separate villages.

All these old customs are best preserved, of course, in isolated localities. Many of them have broken down among the Polynesians who live in the vicinity of such predominantly European areas as seaports. Natives who have been away from their villages for a long time, either in school or working away from home, also tend to shun some of the traditional associations because they have often acquired some of the individualism and acquisitiveness that characterizes Western culture and hence seek to avoid the demands such associations make on one's time and economic resources.

The Polynesians are now Christians, but in their religious life, as in their family life, they have retained many traditional features. The pageantry of religious holidays has been made over so as largely to replace the old pagan religious festivals. Sunday is a feast day such as many of the old-time ceremonies were. Everyone wears his best clothes to church, where he participates enthusiastically in the service as his grandfather used to participate in pagan ceremonies. After the ceremony, as of old, the day is given over to visiting and feasting. Saturday, and often Friday too, are devoted to the preparation of special food and dress for the great occasion.

The building of churches has taken the place of such old-time cooperative labors and festival occasions as the construction of great seagoing canoes, houses of learning, or religious meeting grounds. Families and villages compete for prestige by contributing huge gifts of food, funds, or work. In this competition many Polynesian villages have plunged heavily into debt to build not one but several huge cathedrallike churches. This prestige struggle closely resembles the intervillage rivalry of aboriginal days in the construction of other sorts of public works.

Church collections are similarly interpreted as occasions to compete for prestige as were the occasions in the past when a chief called for contributions of food or wealth for a great ceremonial feast. Now, as then, the size of each contribution is widely publicized and villagers are loud in their praises of those families who scrape together big contributions and are equally loud in chiding those who are niggardly or so improvident as to have little to offer.

Religious beliefs, too, have a characteristic Polynesian color in the islands. The Christian God is worshiped, but even yet He is not the only supernatural being the Polynesians accept. Old beliefs in magic and in the beings who give power to magic charms still exist. Part of the necessary technique of gardening, for conservative modern Polynesians, are the
fertility rites by which appeals are made to the old gods to increase the crops. Other ancient charms are used to avoid loss through insect pests, or other bad luck. Fishermen, too, will have better luck according to modern Polynesians if they perform some of the ancient fishing rites before going out. An enemy who cannot be reached by direct means can still be injured by sorcery. And love magic can win the maiden one has wooed in vain. Even Christian prayer and the Bible are often used in magical rites in the pattern of ancient Polynesia. Such ceremonies as communion and baptism are circumstantially similar to the aboriginal rituals by which a child’s mana was secured to him, and the modern rites are often similarly regarded.

In other ways, too, pagan values and life views are preserved in modern Polynesian life. Most marked perhaps because it is most alien to our own standards, is the insistence of Polynesians, against the wishes of missionaries and colonial administrators, on the right of young people of both sexes to enjoy premarital sex experimentation. Polynesians are more matter-of-fact than we are about the whole matter of relations between the sexes. Physical sex they regard as a harmless pleasure provided certain ancient Polynesian rules are followed. These rules specify that both parties must consent to the union, that only certain girls are eligible to a given boy and vice versa, and also control in an informal but effective way the amount of time and attention young people may give to their love affairs. Virginity is not valued for its own sake, but a wanton woman is as despised by the Polynesians as by us. Rape is practically unknown in Polynesia, and prostitution is very rare outside of the port cities.

Romantic love is not thought of as the primary basis of marriage in Polynesia as it usually is of marriages in our society. There marriage is recognized as a collaboration between a man and a woman to set up and maintain a household (remember that certain essential tasks belong exclusively to one sex or the other) and to produce and rear children to carry on the family lines. The marriage of two people also establishes important reciprocal relations between their families so that one’s family traditionally has a voice in one’s choice of a mate. After marriage both husband and wife are expected to remain faithful to one another. But if a marriage is unsuccessful, the Polynesians deal with it straightforwardly as they always have: the couple separates and each party returns to his family. If there is no reconciliation within a reasonable time the individuals are free to remarry. These customs continue in spite of opposition by missionaries and government officials. As a result there may be a number of couples living together in a Polynesian village who are husbands and wives in
Polynesian eyes but who have never been legally divorced from former mates nor married to their present ones. But these legal procedures are foreign importations alien to Polynesian life and are therefore often ignored in favor of traditional modes of divorce and remarriage.

The Polynesians have been the despair of the alien plantation owners and traders who have never succeeded in getting them to accept the Western idea that work for work's sake and for the accumulation of wealth is man's moral duty. As Prof. F. M. Keesing has remarked, "The Polynesian islanders had probably the highest standards of leisure in the world." They have clung to this high standard in the face of all pressure from the busy alien intruders. We must not make the mistake of dismissing the Polynesian viewpoint by simply labeling them "lazy." The islanders can and do work prodigiously when they see some point in doing so. They still prefer to work in cooperative groups under the leadership of a man of high prestige as they did in aboriginal days, to make a social occasion of the task and to enliven it with friendly competition among the workers. Under such conditions they work intensively and continuously until the job is done, then relax at a feast given in their honor. In comparison with this socially satisfying way of working, the routine jobs of the plantation offer no attractions to the Polynesians. Their material needs are slight even though they now buy kerosene, cloth, metal tools and utensils, soap, and a few other items from the trader. The Polynesian householder is willing to dry enough coconuts into copra to trade for such necessities and luxuries but is not willing to work at un congenial tasks beyond that point. He feels that to grub for money that will not buy anything he really wants and yet will leave him little time for socially satisfying pursuits is a definite lowering of his standard of living. He works to live, sees no point in living to work.

Another basic difference between Polynesians and Western peoples is their disagreement as to what constitutes wealth and what its essential purpose is. To most Polynesians wealth is still counted in native goods, and its real value still lies in the prestige that comes from distributing it on suitable occasions. The Western ideal of hoarding wealth is offensive to the Polynesians and alien to their whole conception of its function. Keesing sums up the main differences neatly: "In terms of native economic ideals the individualistic, bustling, efficient, materialistic, and philanthropic Westerner is likely to be judged as anti-social, greedy, stingy and misguided zealously, a kind of bedeviled god or commercial lunatic." The Polynesians have retained their own ideas on this subject through 150 years of contact with Western culture and are not likely to change over to the Western way of thinking in any foreseeable future.
Before the depression of 1930-35 colonial authorities struggled to overcome these "backward" ideas of the Polynesians regarding the importance of work and the accumulation of wealth in order to get them to produce money crops for world trade. During the depression, however, it became impossible, because of shipping costs, to sell island products. This in turn made it impossible for the Polynesians to buy kerosene, cloth, imported food, etc., and they had to return to subsistence horticulture, the making of tapa, and to other ancient arts and crafts to supply their needs. This experience has convinced government officials of the vulnerability of an export economy for the islands, with the result that they are now inclined to encourage the ancient pattern of subsistence living first, supplemented by only such commercial development as does not interfere with the self-sufficiency of the islanders. In the present war situation with its shortage of shipping the Polynesians on isolated islands are undoubtedly being thrown back more than ever on the ancient ways of acquiring food, clothing, and shelter.

What has been said above about the modern Polynesian and his attitude toward work does not apply to those living in port cities, to the Hawaiians, or in its entirety to the Maori of New Zealand. The former, except for those who are only temporary visitors, are largely "detribalized," have given up most of their Polynesian ways and have become a landless proletarian. The Hawaiians have for the most part accepted the American way of political and economic life and take their part in Hawaiian affairs pretty much on a par with the other racial and cultural groups of those islands. The Maori have developed in recent years, along with a remarkable renaissance of traditional literature and legend, tribal community life, native games, dancing and music, etiquette and ceremony, methods of cooperative farming and ranching on their own lands. Cooperative ownership and work fit in very well with the customary Polynesian methods of getting jobs done, and the enterprises operate successfully at lower costs than small nonnative holders can manage. It is possible that Polynesians on other islands might enter world economy successfully in the future through the development of cooperative production operated by and for themselves.

The leisure time the aboriginal Polynesians had in such abundance was utilized by them to a considerable extent for esthetic purposes. Intervillage and intravillage festivals and ceremonies with the accompanying music and dancing were important and socially satisfying activities which used up considerable time throughout aboriginal Polynesia. Men did expert wood carving, mostly of objects with religious significance. Women became renowned for their skill in painting beautiful designs on tapa cloth. Other arts and crafts flourished and gave esthetic pleasure and occupation to
large numbers of people. Warfare, itself, as carried on in Polynesia, was a sort of supersport with rules of fair play that were scrupulously followed by all participants. Most of these things were eliminated from Polynesian life in the early days of contact with the Europeans. The music, singing, and dancing were forbidden by the missionaries as indecent and conducive to paganism. Warfare at first became fiercer and bloodier but later was abandoned altogether. The main impetus to wood carving vanished with the loss of belief in the old gods. The making and decorating of tapa ceased in many places when manufactured cloth became plentiful. Many other native arts and crafts likewise died out in favor of imported trade goods. The painstaking manufacture of sailing canoes, for instance, ceased in favor of European-type boats.

The discontinuance of all these activities left great gaps in the lives of Polynesians, both in their utilization of time and in their life satisfactions. Until recently both missionaries and government officials, intent as they were on rapidly assimilating the Polynesians to a European–Christian type of culture, blindly fostered this serious disjointsing of Polynesian life by teaching the people to spurn all things native. There has been a fortunate change of heart now, though, and some things Polynesian are being actively encouraged. Native music, singing and dancing, purged of the features to which missionaries most objected, are now again being enjoyed by the Polynesians. Traditional crafts are being renewed, especially in American Samoa where tourists have supplied the market and the Naval Governor has encouraged the revival, and in New Zealand where the Maori are purposefully reviving their cultural consciousness and traditional ways of life.

Along with these revivals of aboriginal arts and sometimes preceding them, the Polynesians have taken over Western arts, music, and games, especially athletic contests which supply a sort of substitute outlet for the intergroup rivalries that once nourished tribal warfare. All these activities have been given a Polynesian twist. For instance, the natives have developed a unique style of vocal music, combining modern elements with the ancient art of part-singing, in which as many as eight separate melodies are blended harmoniously together. Hymns are composed in this form and the choirs of different villages compete fiercely for community prestige at hymn-singing contests.

The future happiness of the Polynesians will be enhanced if they are encouraged to find additional ways of satisfying their strong artistic and creative drives. Past experience (and modern psychological knowledge) indicates that if such outlets are to be successful, they cannot be invented by administrators and more or less forced on the people. The Polynesians
will be able to derive creative satisfaction only from activities they themselves choose and which they regard as vital expressions of their cultural heritage. Administrators can help, however, by a program of encouragement including, if necessary, the development of export markets for Polynesian art and handicrafts. A major part in any such program aimed at bettering the lot of the Polynesian people will be an enlightened educational system in which modern educational practices are adapted to the special conditions that are found in the islands.

Until recently all schools in Polynesia have been operated by the missions. Their aims have been essentially: (1) to make the populace literate in Polynesian so they can read the Bible and other religious tracts that have been translated into that tongue; (2) to train native pastors; and (3) to inculcate in children Christian and Western ideals of morality (as interpreted by the missionaries) while discouraging many native ideals of behavior that seemed undesirable to the missionaries. These schools have usually failed to give the islanders a comprehensive understanding of Western culture. At the same time they have often tended to instill in the students an attitude of contempt toward all things Polynesian. They have thus unwittingly increased the cultural and personal disorganization of the Polynesian people. Missionary schools still supply the only native education in the French Polynesian possessions. The British also tend to work through missionary schools, concentrate more on boys than on girls, and segregate natives from nonnatives. Only in Hawaii, New Zealand, and American Samoa are there secular coeducational schools at which attendance is required. In the latter islands, private (mission) schools are permitted to operate only if they maintain the standards of scholarship set for the government schools.

Most schooling in Polynesia has heretofore been aimed at the rapid assimilation of natives into Western culture. American authorities even went to the extent of carrying on all instruction in English, even though they knew that many of the students would have no use for that language after their return to their home villages. In the last few years, however, the idea has developed of using schools for natives as a means of preserving and "improving" a Polynesian type of society. The relative merits of Westernization versus the preservation of Polynesian culture are still under discussion by the educators working in the islands. A summary of this discussion appears in F. M. Keesing's book, "The South Seas in the Modern World."

Until a solution to the educational problem is found and put into effect by unbiased experts, it is unlikely that the educational needs and rights of the Polynesians will be adequately taken into account. Some planta-
tion owners and other employers in the islands, for instance, oppose the edu-
cation of Polynesians because they want to keep the native peoples sub-
merged and docile. Western craftsmen sometimes try to monopolize their 
sources of income by preventing Polynesians from learning their crafts. 
Many missionaries still want to inculcate in their students ultraconserva-
tive Western religious and moral attitudes which ceased to be effective 
in our own society 40 or 50 years ago. Moreover, most Americans and 
Europeans still assume that native peoples are biologically inferior in 
mental ability to white participants in Western culture. This assumption 
is not supported by the findings of anthropologists who have investigated 
the matter scientifically. There is no evidence to suggest that any race 

is biologically inferior to any other. The differential accomplishments 
of diverse peoples appears to reflect merely historical accident, variations 
in the kinds of life goals that are encouraged in different societies, and 
the differential opportunities inherent in the diverse social situations in 
which the peoples of the world live. All existing peoples, given equal 
opportunities, appear to be capable of high intellectual attainment, and 
equally adaptable to new social situations. Polynesian education, limited 
as it has been by the erroneous assumption of racial inferiority and by the 
other factors mentioned above, has never approached the minimum home 

standards of the dominant Western countries.

Even the educational standards of our own schools are being questioned 
by leading educators today. These Western standards are challenged by 
the fact that education built around inflexible rules of conduct is inade-
quate to guide our own people in adjusting themselves to our rapidly chang-
ing Western culture. Modern educators are therefore seeking better ways 
to teach children to be adaptable to social change. This end is not ac-
complished, either by instilling in children a blind emotional reverence 
for the traditions of their fathers, nor yet by inspiring them to choose 
new and untried paths just for the sake of being different. The successful 
method is, rather, to train them to understand and analyze their problems 
intellectually, without prejudice or bias, and to choose courses of action 
that are firmly based on these thought-out analyses.

If this educational policy were adopted in Polynesia, the natives would 
not be taught to feel contemptuous of their own culture. Instead, they 
would learn to view it, and the culture of the Western world, as two of 
the many ways of life that various peoples of the world have worked out. 
Equipped with such an understanding of social processes, the Polynesians 
could then be permitted to choose for themselves the manner of living 
most satisfying to them. Under such a program the natives would probably
Plate 17

Upper: Preparations for a Samoan feast. Whole roast pigs and other foods are stacked about ready for distribution. Note woven mat blinds on typical houses in background. Courtesy Bishop Museum.

Lower: A Samoan chief (left), with fly-whisk badge of office over his left shoulder, converses with his tulafale, or "talking-chief," while the latter braids sennit cord. Photograph by Paramount-Flaherty Expedition, courtesy National Geographic Magazine.
Plate 18

Upper: Typical Tongan house, about 1900. Note the round ends characteristic of western Polynesian houses. The walls are made of interwoven canes and the roof is thatched.

Lower: Rectangular eastern Polynesian house, Hereheretue atoll, Tuamotu, about 1900. Both photographs from U.S.S. *Albatross* albums, courtesy National Archives.
Plate 19

Upper: Small dug-out fishing canoe, showing method of carrying. Mitiaro, Cook Islands. This type of canoe is commonly made for family use on high islands, or wherever trees of suitable size can be obtained. Courtesy Bishop Museum.

Lower: Small sewed plank fishing canoe, Tatakoto, Tuamotu. This type of construction occurs on many atolls where trees are not large enough to permit the dug-out construction. Photograph by K. P. Emory, courtesy Bishop Museum.
Plate 20

Upper: Split coconuts being sun-dried at Mangareva to make copra, the main export commodity of modern Polynesia. In the background is a typical interisland trading schooner.

continue the process of amalgamating some features of the old Polynesian life with certain selected aspects of Western ways. But the process would then be the result of their free and intelligent choices rather than a consequence of the present blind groping between a traditional culture which still has many emotional appeals and an admired but only partially understood alien set of values. Under such changed circumstances the Polynesians would be aware that they could effectively shape their own destinies, and this knowledge would help greatly to eliminate the personal and cultural disorganization they have suffered from their contacts with the Western world.

Politically as well as educationally, the old Polynesian ways are in conflict with those introduced by Western peoples. The traditional leadership of the Polynesians by their chiefs and priests, as we saw earlier, was largely undermined by the Europeans who first came to the islands. This was partly due to their lack of understanding of Polynesian social organization, as when Pomare was elevated in Tahiti to the injury of other chiefs of higher rank. Partly it was the inevitable accompaniment of loss of belief in the old Polynesian gods, for chiefs and priests both drew their power from their supposed intimacy with those gods. Some of the destruction of native leadership by the newcomers was done intentionally as a means of reducing the morale of the islanders and thus making them more docile. Today the members of chiefly families still are accorded a certain sentimental prestige but often can claim no real leadership. Most native leaders today are men who have been trained in mission or government schools and given posts as native pastors or minor government officials. The former play roles similar in many respects to those of the old-time priests. For the most part, however, native leadership in Polynesia is now dispersed and lacks both the organization and the sure authority in which it was once clothed. The Maori are an exception, for part of their recent cultural rejuvenation has been the attempt to reconstitute, at least in part, the power and prestige of traditional chiefs. Tonga's modern Parliament is composed half of hereditary chiefs and half of commoners. Samoa still selects fono members from families which possess titles. With these exceptions the old-time power and much of the prestige of Polynesian chiefs has disappeared, probably forever.

The formal government structures of most Polynesian islands today feature nonnative administrators in the top positions. Only Tonga is nominally still a sovereign state with a native queen, premier, and cabinet members, plus a parliament made up of seven members of the hereditary aristocracy and seven commoners. This government is advised by a British consul and the islands are a British Protectorate. In New Zealand and
Hawaii the Polynesian populations participate as full-fledged citizens in the regular governments of those islands. The Maori have sent several brilliant men of their race to the New Zealand Parliament, and on two occasions Maori have been acting prime ministers. In Hawaii the proportion of legislators of Hawaiian blood is larger than the proportion of Polynesians in the total population. This suggests the wide participation of Hawaiians in the political life of that territory.

Except for these groups the Polynesians have today only advisory or minor official roles in the administrations of their native islands and have no effective voice in writing the laws under which they live. The courts, too, are in the hands of the non-Polynesian governments. There is no jury system, but native leaders are chosen to advise the courts when natives are tried. Natives have no voice in the trials of nonnatives. The imposition of Western law by alien courts has led and continues to lead to social disorganization in Polynesian communities. Some serious breaches of native rules of behavior are not recognized as wrongs by these laws or courts, while some behavior that is perfectly acceptable in Polynesian eyes is severely punished. In some cases compliance with the alien law necessitates breaking indigenous rules. Even more disrupting is the fact that some of the traditional Polynesian methods of enforcing conformity to social rules are themselves regarded as crimes in the alien courts. The laws and courts thus seem capricious and unfair to the Polynesians, who circumvent them whenever possible just as the American public circumvented the unrealistic prohibition law.

Nevertheless, these alien laws which do not accord with Polynesian principles of morality are a continuous source of irritation to them and a needless hindrance to their realization of a satisfactory social life. If the governments which administer the islands were to enlist the cooperation of the Polynesians in devising laws and punishments that are consistent with Polynesian ideas about such matters, the natives would cooperate in law enforcement and take an intelligent interest in the whole organization of this aspect of their lives. And a real start would then have been made toward the desirable end of preparing them to govern themselves. We believers in democracy are now fighting for the freedom of all people, everywhere. The most fundamental freedom of all is the right to self-government. To be consistent with our ideals and to prove our sincerity to the world, we should prepare to give this privilege, first of all, to the disenfranchized peoples who are now under our dominion.
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APPENDIX

PERTINENT FACTS ABOUT THE MAIN ISLAND GROUPS IN POLYNESIA

COOK ISLANDS

Including Niue and Rarotonga, there are 16 islands in the Cook group; 9 of them are volcanic in origin and 7 are coral atolls. The total area of the 16 islands is 199 square miles. The volcanic islands rise to elevations of 2,000 or 3,000 feet. The group stretches from 8° to 23° S. latitude and from 156° to 170° W. longitude. Temperatures are mild with little seasonal variation. The rainfall is over 80 inches annually, most of which comes between October and May. The occasional hurricanes which strike the islands usually come between December and April.

The population in 1941 was about 17,000. Of this number only 327 individuals were without native blood. The carefree, happy-go-lucky people of these islands are governed as a dependency of New Zealand. In local affairs native chiefs are still important and so are councils chosen from the elders.

The southern islands of this administrative group, the volcanic islands, are fertile and food is abundant. The people export considerable quantities of tropical fruits and vegetables to the New Zealand market. The northern islands, the coral atolls, produce little vegetable food beyond coconuts. Fish supply most of the protein diet throughout the group, although most native families keep a few pigs and chickens which are eaten only on feast days.

EASTER ISLAND

Easter Island, 27°05' S. latitude, 109°20' W. longitude, is an isolated volcanic island at the extreme eastern corner of Polynesia. Its area is about 50 square miles and the highest point on the island is 1,969 feet above sea level. The weather is mild with average temperatures ranging between 62° and 74°. The southeast trade winds blow constantly from October to April. Rainfall is about 50 inches per year. There are no forests nor many trees. Most of the island is covered with long grass.

There were 460 inhabitants in 1941, about one-third of whom claimed to be pure Easter Islanders. Except for a few Chileans and Europeans,
the rest of the population is of mixed blood with Chilean, Tahitian, and various European strains intermingled with the original Easter Islanders.

The island is a dependency of Chile, which has leased most of it to an English sheep-herding company. The company has built a fence enclosing its property and prohibits the islanders from entering the grazing lands without special permission. The natives are renowned for their thievery and regard the property of any stranger as fair game. Especially do they delight in making off with sheep belonging to the large ranch.

Although the climate is healthful, the natives do not receive adequate medical attention and in addition suffer from malnutrition.

**HAWAIIAN ISLANDS**

The Hawaiian Islands stretch between 18°55' and 28°25' N. latitude and between 154°48' and 178°25' W. longitude. The 8 islands and 10 islets total 6,500 square miles in area. The highest peak, Mauna Kea, on the island of Hawaii, is 13,825 feet above sea level. The Hawaiian Islands have one of the most delightful climates in the world, cool and equable with abundant sunshine and no tropical storms. Annual rainfall varies tremendously from place to place on each island. It is heaviest on the northeast side, where the trade winds strike, and increases with altitude. The highest peak, which is almost always cloud-covered, has perhaps the heaviest precipitation in the world—over 500 inches annually.

Hawaii is an organized territory of the United States and had a population in 1940 of 423,329. The constituents of this population are shown in the following table:

<table>
<thead>
<tr>
<th>Race</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure Hawaiian</td>
<td>5.1</td>
</tr>
<tr>
<td>Part Hawaiian</td>
<td>10.3</td>
</tr>
<tr>
<td>Japanese</td>
<td>37.4</td>
</tr>
<tr>
<td>White</td>
<td>25.9</td>
</tr>
<tr>
<td>Filipino</td>
<td>12.6</td>
</tr>
<tr>
<td>Chinese</td>
<td>6.9</td>
</tr>
<tr>
<td>Korean</td>
<td>1.6</td>
</tr>
<tr>
<td>Other</td>
<td>.2</td>
</tr>
</tbody>
</table>

Quantities of temperate-zone foods—vegetables, flour, meats, etc.—are imported into the islands. Many subtropical vegetables and fruits and also coffee are raised both for local consumption and for export. The most important export crops are pineapples and sugar. Taro is grown in quantity to make the still popular Polynesian dish, *poi*. Cattle ranching is an extensive industry but does not meet the local needs.
GAMBIER ISLANDS

The Gambier Islands are an administrative unit of French Oceania including the Mangareva group and the southeastern part of the Tuamotu archipelago. They stretch from 15° to 24° S. latitude and from 136° to 145° W. longitude. There are 37 islands in the administrative division with a total area of only 6 square miles. The Mangareva group consists of volcanic islets surrounded by coral reefs and reach an elevation of 1,427 feet. The atolls seldom exceed an elevation of 20 feet above sea level. The climate is subtropical and healthful for Europeans and natives. January to March is the hot season. The southeast trade winds blow from April to December with gales and occasional hurricanes in August. Most of the rainfall comes between September and December.

Only 11 of the islands are inhabited, with a total population in 1936 of 1,579. Ninety-seven percent of the inhabitants are natives and two-thirds of the nonnatives are Chinese. These islands as well as the other French possessions in Polynesia are governed from Papeete, Tahiti. All these colonies were taken over by De Gaulle sympathizers when France fell and are now part of the United Nations.

The natives are described as carefree and willing to work only periodically at making copra or gathering pearl shell. The undernourishment from which these islanders suffer is partly due to the fact that the islands support only a meager vegetation. It is partly attributed to the uneven distribution of the breadfruit trees and partly to the natives' failure to make full use of the arable land. Coconuts and manioc, grown in the lowlands, are the main sources of vegetable foods. Fish and shellfish are plentiful everywhere.

MARQUESAS

The Marquesas Islands, 70°50' to 10°35' S. latitude and 138°25' to 140°50' W. longitude, consist of 10 main islands with a total area of 450 square miles. These islands are volcanic in origin and very rugged, with deeply cut valleys separated by sharp ridges. The highest elevation is about 4,000 feet and most of the islands rise above 2,000 feet. There are few coral reefs in the vicinity of these islands, and coastal cliffs make boat landings impossible except at the heads of the bays where small streams flow into the ocean.

The climate is subtropical and very pleasant. The cool season occurs from November to April on the north coast of each island and from May to October on the south coast. Trade winds are unsteady in this area but prevailingly easterly. There is no predominantly rainy season, but the
annual precipitation is usually moderately heavy. Occasionally, however, there are severe droughts which sometimes last several years.

In 1936 the population was about 2,400. A large proportion of modern Marquesans are part European or part Chinese or both. Native men considerably outnumber women. There are a few Chinese and European residents in the islands. The government is De Gaulle French with headquarters at Papeete. The Marquesas are divided into two administrative units, one including the northwest islands, the other including those to the southeast.

The natives are described as carefree and likeable but distrustful of strangers. They have reason for this latter attitude for they have been in the past the most ill-treated by Europeans of all Polynesians except possibly the Easter Islanders. Epidemic diseases and tuberculosis have nearly ruined and exterminated the Marquesans. Mosquitoes in the highland areas carry the germs of elephantiasis, the disease most dreaded by Polynesians.

The soil of the Marquesas is fertile and could produce far more than it does if there were sufficient people to work it, but even the few Marquesans who remain are unwilling to work for hire. They raise sufficient breadfruit and coconuts for their own needs, keep a few pigs and chickens for feast occasions, and catch fish by deep-sea trolling. There are a few wild cattle and some goats in the islands, and one is occasionally captured. Vanilla grows wild in the Marquesas and could be cultivated for sale. The region would also be suitable for the production of coffee.

NEW ZEALAND

The two large islands and one tiny one which make up New Zealand lie between 34°30' and 47°30' S. latitude and between 166°36' and 178°36' E. longitude. It is a continental land mass with an area of 104,403 square miles. The North Island is a region of rolling plains and hills, but the South Island rises in its southern part to a rugged mountain terrain with many glaciers and picturesque fjords along the southwest coast.

If the land masses were larger, the South Island would be considerably colder than the North Island because New Zealand's north to south extension is comparable to the distance between Atlanta, Ga., and Duluth, Minn. But since the land mass is small, the moderating influences of the surrounding ocean predominate, so that throughout the islands winters are mild and summers are not excessively hot. Average temperatures range from 40° in winter (July) to 62° in summer (January). Rainfall averages from 30 to 40 inches over most of the country but rises as high as 116 inches in the southern mountains. The north end of the North Island is in the path
of the southeast trade winds, but the rest of the country is in the belt of the prevailing westerlies.

New Zealand is a dominion in the British Commonwealth of Nations, with a population of about 1,700,000, of whom approximately 100,000 are part of full-blooded Maori. The other 1,600,000 inhabitants are almost all of British descent. The Maori are full citizens of the dominion and participate in the representative government. Most of them live by choice in their own communities on the North Island where they preserve their Polynesian cultural heritage.

The dominion has fertile soil, and practically all temperate-zone crops are grown there. Extensive grazing lands support large herds of cattle and sheep. In aboriginal days the Maori depended heavily upon the sweet potato, taro, wild fern roots, and fish. Tropical plants such as breadfruit and coconut will not grow in New Zealand. Quantities of tropical fruits and vegetables are imported. Its extensive exports include agricultural, dairy, and meat products, wool, lumber, and minerals, including gold. Some Maori make communal use of tribal lands as commercial agriculturists and herdsmen.

SAMOA

The 13 islands of Samoa extend from 13°30' to 14°30' S. latitude and from 168° to 173° W. longitude. They are volcanic islands and there have been several eruptions on Savai'i in the last hundred years. The total area is 1,210 square miles. The climate is moist and sometimes oppressively hot, but healthful and pleasant on the whole. The wet season extends from October to March. The warmest month is December. There are westerly winds from January to March and the southeasterly trades blow steadily the rest of the year.

In 1939 the population was approximately 72,000, of whom about 95 percent were natives. There are less than 1,000 Whites in the islands and some 400 Chinese. The Samoans are famous for their peaceable, friendly dispositions and for their fine hospitality. Western Samoa, a German colony before the last war, is now a New Zealand mandate. Eastern Samoa is a United States possession, the status of which Congress has never defined. It is governed by the United States Navy.

Samoans have an ample supply of all the important Polynesian vegetable foods: breadfruit, coconuts, taro, bananas, and yams. Fish are plentiful in the coral reefs which surround most of the islands. Each family has a few pigs and chickens which are utilized only on special occasions. A little copra, bananas, and citrus fruit are exported from the islands, but the most
promising export is native handicraft which is sold to tourists in Pago Pago and also sent to Hawaii for sale. Some years ago English planters introduced rubber trees into western Samoa, but although the trees flourished, the experiment proved uneconomical because of excessive shipping costs. The trees are now semiwild but have been tapped occasionally in recent years. About 60 tons of rubber were exported in 1937.

SOCIETY ISLANDS

The 14 Society Islands are located near the center of the Polynesian triangle. The two groups of windward and leeward islands stretch from 15°50' to 17°55' S. latitude and from 148° to 154°40' W. longitude. Their total area is 700 square miles. Most of the islands are volcanic with rugged mountainous interiors. All the volcanic islands rise over 2,000 feet above sea level, and the peak of the highest one is 7,339 feet. The 6 coral atolls of the group are all less than 50 feet high.

The climate is subtropical, but the nights are cool. The warmest and rainiest months are January to March. July and August are the coolest months. Easterly winds prevail, with gales and occasional hurricanes in September or between December and February. The annual rainfall averages from 55 to 125 inches and is heaviest on the windward (southeast) sides of all the islands.

The population in 1936 was 32,209. It has grown rapidly in the last few years owing both to the increase in the number of natives and to extensive immigration. These islands exhibit the most extensive racial mixture in tropical Polynesia. The non-Polynesian population is largely concentrated in Papeete, the seat of government of the French possessions in Polynesia, all of which have pledged allegiance to the Free French under De Gaulle. Several hundred European French live there as well as most of the 4,000 Chinese residents of the Society Islands. The natives living in and near Papeete are largely detribalized. Those living in the isolated parts of Tahiti or on outlying islands have preserved more of the Polynesian ways of life.

Public health and sanitation measures are adequate in Papeete but primitive elsewhere. There are no house flies in these islands, but biting black sand flies are common. Mosquitoes in the mountains transmit the germs of elephantiasis.

Papeete, the metropolis of central Polynesia, is the heart of European culture and commerce in the islands. Copra, pearl shell, and tropical fruits are brought to Papeete from outlying islands for shipment to the outside world. The French authorities have experimented with various commercial
crops, mostly grown on European-owned plantations. Some vanilla is exported as well as sugar and various sugar products. The dehydration of bananas for export to the world was developed and commercialized in Tahiti.

**TOKELAU**

The Tokelau or Union Group, north of Samoa, consists of three low coral atolls with a total area of 4 square miles. The latitude of the group is 8°32' to 9°26' S. and the longitude is 171°11' to 172°31' W. The climate here is hot, especially from October to March, which is the season of humid calms and occasional hurricanes. The trade winds bring cooler weather between March and October.

The population of the Tokelauans in 1939 was 1,191. No Europeans or other aliens were residing in the islands at that time. These islands are a New Zealand dependency and for the last few years they have been administered from the mandate headquarters in western Samoa. This amalgamation was very welcome to the Tokelauans, whose culture is very similar to that of Samoa and who, like the Samoans, are a quiet, kindly people, extremely hospitable to strangers.

The main food resources are coconuts, taro, and fish, plus a few breadfruit, bananas, and papayas. Practically no export products originate in these isolated islands. Health and sanitation conditions are primitive. Ringworm, yaws, and eye diseases are common.

**TONGA**

The Tongan Islands stretch from 15° to 23°30' S. latitude and from 173° to 177° W. longitude. There are 150 separate islands and islets in the group totaling 250 square miles in area. The bigger islands are volcanic, usually with fringing coral reefs, but a number of the smaller ones are coral atolls or isolated rock ledges. In comparison with Samoa, the climate is dry and cool. Intermittent northwest to north winds blow from January to March and there are occasional hurricanes. But the cool southeast trades blow from April to December. Rainfall averages about 80 inches per year.

The population in 1938 was approximately 33,000. Over 95 percent are native Tongans. There are about 400 Whites and a few Chinese and Japanese.

Because of its cool, dry climate, vegetation is not as lush in Tonga as in Samoa, but there are ample supplies of breadfruit, coconuts, taro, yams, bananas, and fish for the local needs. In addition, there are the usual
scant supplies of chickens and pigs which are reserved for occasional feasts. Some copra, bananas, and citrus fruits are exported.

Tonga is the only group of Polynesian islands that is still even nominally self-governing. It is a limited monarchy with native ministers and parliament who govern with the advice of a British consul. The islands are a protectorate of Great Britain.

TUAMOTU

The Tuamotu archipelago extends from 14° to 25° S. latitude and from 125° to 149° W. longitude. There are actually about 85 atolls in the archipelago but over 30 of those at its southeastern extremity are included by the French colonial authorities in the Gambier or Mangarevan administrative unit. The 56 islands included in the Tuamotuan administrative unit total 310 square miles in area. Except for Makatea and one or two other raised coral islands, the Tuamotus are all low-lying atolls, seldom rising over 30 feet above the sea.

The climate is hot and dry. The trade winds are unsteady, mostly northeasterly in the eastern part of the archipelago, and southeasterly in the western part. The northeasterlies predominate from November to May, and the southeasterlies prevail from June to October. There are frequent hurricanes in the spring and fall.

The population in 1936 was 4,346. Ninety-five percent were natives among whom men outnumber women. Ninety percent of the nonnatives are Chinese, some of whom are laborers, but most of whom are merchants. Every inhabited island in the Tuamotus (and many of those in other parts of Polynesia) has at least one resident Chinese trader.

Tuamotuan existence is precarious, and the natives are hard working and thrifty. They are also shrewd traders and have managed better than most Polynesians to protect their own commercial interests against the local Chinese merchants. These islanders are among the most isolated and conservative Polynesians. They are, therefore, easily offended by breaches of custom. As another consequence of their conservatism they are very much attached to their home islands and reluctant to leave them for any considerable period.

The Tuamotuans are governed by the De Gaulle French from Papeete. The individual islands are governed by native chiefs.

The soil of these islands, made up of broken-down coral and a little leaf mold, is too sterile for breadfruit, banana, or citrus trees, and there is not enough fresh water for the cultivation of taro. Coconuts and pandanus fruits therefore supply the bulk of the vegetable diet, which is supple-
mented by the boundless quantities of fish and shellfish found in the lagoons and adjacent sea. Small quantities of copra and pearl shell are exported from the islands. Makatea, the raised coral island, contains a sizeable deposit of phosphate rock which is mined by a French company.

The Tuamotus are on the whole healthful for Europeans provided certain precautions are taken. Some kinds of fish are poisonous at certain seasons on some atolls. The seasons and the kind of fish affected vary from island to island, and the only safeguard is to follow local advice. Cuts from the coral rock become dangerously infected and salt-water sores are common. Such cuts and sores can be cured with alcohol—swimming should be avoided until they are healed. Colored glasses are necessary because of the brilliant light reflected from the expanses of white coral.

**TUBUAI OR AUSTRAL ISLANDS**

The Tubuai or Austral Islands, including Rapa, lie between 22°30' and 24° S. latitude and 147°40' and 154°55' W. longitude. The four inhabited islands contain 67 square miles. They are volcanic in origin and reach a maximum altitude of around 1,300 feet. The climate is subtropical, but never hot. The cooler season extends from November to March when the southeast trade winds blow steadily.

The population in 1936 was 3,100. Because of their economic unimportance, few vessels visit the Tubuai Islands. Hardly any non-Polynesians live on these isolated islands. The natives are friendly and trusting. The Australs are governed by the De Gaulle French.

The main food staples in these islands are taro and fish. Breadfruit, plantains, pandanus, oranges, mangoes, and avocados grow in a semiwild state and furnish supplementary food. Coconut trees are also plentiful. Almost the only export is a little coffee raised for consumption in the other islands of French Polynesia.

The islands are healthful for Europeans except for the danger of contracting elephantiasis from the bites of mountain mosquitoes.