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William H. Alkire

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Article abstract

Three classes of spirits are important in the domains of illness and curing—“malevolent” spirits that cause sickness, divination spirits that diagnose ailments, and “good” spirits that aid in curing. Diviners, medicine curers, and massage curers focus on different aspects of treatment. This compartmentalization of knowledge and an associated pattern of cross-referral means that patients frequently consult with all three types of specialists. This not only maximizes the chances for cure but minimizes the possibility of assigning blame for failed cures. The organizing principles emphasized in these domains include dualistic and quadripartite divisions, lineality, locality, and homologous associations.

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The Traditional Classification and Treatment of Illness on Woleai and Lamotrek in the Caroline Islands, Micronesia

William H. Alkire
University of Victoria

Three classes of spirits are important in the domains of illness and curing—“malevolent” spirits that cause sickness, divination spirits that diagnose ailments, and “good” spirits that aid in curing. Diviners, medicine curers, and massage curers focus on different aspects of treatment. This compartmentalization of knowledge and an associated pattern of cross-referral means that patients frequently consult with all three types of specialists. This not only maximizes the chances for cure but minimizes the possibility of assigning blame for failed cures. The organizing principles emphasized in these domains include dualistic and quadripartite divisions, lineality, locality, and homologous associations.

Dans les domaines de la maladie et de la guérison, trois classes d'esprits jouent un rôle fondamental : il s'agit d'esprits « malveillants », qui sont à l'origine de la maladie, d'esprits devins, qui en font le diagnostic et de « bons » esprits, qui facilitent la guérison. Le devin, le guérisseur médical et le guérisseur masseur s'occupent à tour de rôle de différents aspects du traitement. Par suite de ce parcellement des connaissances, il arrive souvent que le malade se fasse renvoyer à un spécialiste de chaque type. Une telle pratique a pour effet non seulement de favoriser la guérison mais aussi de rendre plus difficile la tâche de faire retomber le blâme en cas d'échec. L'existence de ces trois domaines est fondée sur des principes directeurs, dont notamment la division dualiste ou quadripartite, la linéarité, la localité et l'association par homologie.

This article will discuss the traditional methods of prophylaxis, diagnosis, and treatment of illness and injury on Woleai and Lamotrek atolls.¹ The analysis will focus on those regularities that seem to reflect underlying principles of organization.

Illness is thought of as an ever present threat by the people of Woleai and Lamotrek. It is one of the first topics that interisland voyagers are asked about when they visit an island and it is the first topic they report on after returning home. This intensity of concern is paralleled by relatively elaborate systems of classification and treatment of illnesses and injuries. Many of the traditional practices described in this essay are still employed by local residents while others have been abandoned in recent years. For the purpose of consistency all practices will be described using the present tense.

On Woleai and Lamotrek illnesses and injuries are treated in two ways: (1) through consumption or application of medicines (*tafey*); and (2) by means of massage (*sheosheo*).² Both of these methods require the services of experts who originally learned their techniques from other recognized practitioners.

Illness and most injuries are believed to be caused by spirits or ghosts. Malevolent or offended spirits may choose to strike one down with illness or intervene so that one suffers an accident and injury. In the typology of Foster and Anderson (1978: 55), this

marks the traditional Woleai and Lamotrek system as a *personalistic* one.

The people of this area of Micronesia were introduced to Western medicines in the late 1800s. During the period of German colonial control (1899-1914) and through the later periods of Japanese (1914-1945) and United States (1945 to present) administration medical services have been provided by the governing authority. However, for the residents of these and other outer islands such health services have always been dependent on the somewhat irregular visits of doctors or medical practitioners who travel out to the islands from the district headquarters on Yap. Only in the last twenty years have "medex" and nursing personnel been available in sufficient numbers to permit their being stationed in all outer island communities. Even so, such specialists have been of limited use owing to the continuing problems of diagnosis—in the absence of adequate laboratory facilities—and frequent shortages of necessary drugs for treatment. Perhaps as a consequence, the people of Woleai and Lamotrek take a pragmatic view of curing. They freely move between traditional and Western methods; if one technique does not effect a cure they try the other. Furthermore, these outer islanders clearly recognize that some diseases are modern introductions, "brought" to their islands by the Japanese or Americans. Logically such diseases would most effectively be treated by introduced medicines; however, in some cases foreign diseases are seen as analogues of local illnesses owing to similarities in symptoms, and as such they have been incorporated into the traditional classification system and are often treated with traditional medicines. For all of these reasons, then, "modern" techniques have not undermined confidence in many traditional practices.

Prophylaxis

Since most diseases are caused by malevolent or angry spirits, steps can be taken to minimize chances that such spirits will come to an island or, if already present, that they will be offended and afflict specific individuals. Firstly, individuals can protect themselves by obeying all taboos. For example, by refraining from sexual intercourse before fishing or working in the taro fields and by refraining from eating prohibited foods or travelling to tabooed locations, one can minimize the possibility of antagonizing a spirit. Secondly, there are positive, collective actions that people can take to protect themselves from malevolent spirits. Most commonly such actions include setting up *peomas* "drive away death" screens and consuming a prophylactic medicine.

Peomas screens are plaited from one or two *ubut*

"immature coconut fronds". They may be fan-shaped, rectangular or irregular in form (*cf* Krämer, 1937: 139). These signs are tied to trees or stuck in the ground at various locations in order to ward off spirits and warn off people. In this latter case, the *peomas* has a function similar to that of a quarantine sign with the significant difference that the *peomas* is meant to keep infected people away from a disease free area. Decisions regarding the use of *peomas* generally are made in the following way.

News of a serious illness or an epidemic might reach an island by means of a visiting canoe. With this knowledge the chiefs decide whether a *peomas* should be imposed to protect their island. If so, they ask a *mwaletab* "taboo man" who has recognized ability in this domain to "close the island". The curer does this by placing the palm frond signs at the ends of the main paths and at the major canoe landings of the island. While erecting the fronds the curer recites a series of prescribed chants, repeating each one four times. The signs are put up late at night when all other residents are cautioned to remain in their houses. The fronds are left in place for a minimum of four days and more commonly for eight days. During this time no visitors from other islands are allowed to land. If a canoe carrying such visitors approaches the island they either turn back when they see the fronds or go on to land at one of the uninhabited islets of the atoll where they would wait until the *peomas* is removed.

A more localized *peomas* can be established around individual residences on an island. Here the head of a household calls in a curer to "close the house" to disease. The curer hangs or erects the fronds on each side of the front of the house and no outsiders are permitted to enter during the four or eight day duration of the closure.

Consumption of medicine as a prophylactic technique can occur in conjunction with or independent of a *peomas* quarantine. Again a chief or a household head decides that the best protection against a perceived epidemic is through positive action. One such occasion occurred on Lamotrek in 1962.³ After several residents of the island had fallen ill the three district chiefs decided that there was the threat of a widespread *maselipig* "influenza epidemic". They decided that *tafey Saufalachig* "Saufalachig medicine" should be prepared so that all residents would have the opportunity to protect themselves from this illness. The medicine is named after the Saufalachig clan, presumably because it was originally formulated by a member of that clan. A senior Saufalachig curer on Lamotrek knew its recipe and he agreed to prepare the medicine the next day. The chiefs asked for volunteers to help in this task and fifteen men and a like number of women agreed.

Just before dawn the next morning all of the

volunteers assembled on the main path at the middle of the island. Politically the island is divided into three districts, descriptively named the North (*Ifang*), the Great Middle (*Lugalap*), and the South (*Jur*). However, for the purposes of labour and some rituals the island is more commonly divided into a northern half and a southern half, so that the Great Middle district is sub-divided and its two parts are incorporated respectively into each of the halves (Alkire, 1965: 71).

The Saufalachig curer gave instructions to the volunteers regarding the ingredients to be collected and then those volunteers who came from the north half of the island followed the path back in that direction while those from the south walked toward their end of the island. The curer accompanied the north-bound group. When this latter group reached the area of the island north of the last dwelling, the chief of the North district cut two fronds from a nearby coconut palm. One was a mature green frond and the other an immature yellow *ubut*. Sections of these two fronds were trimmed and plaited into a single basket so that the green and yellow pinnae were interlaced. All the members of the group then set off to gather the necessary leaves, roots, blossoms, and scrapings from various wild and domestic plants, shrubs, and trees. As each ingredient was picked or trimmed the collector recited a short chant.⁴ All ingredients were placed in the basket carried by the North district chief.

The Saufalachig curer continued to the northern tip of the island and waded some 100 meters out on to the reef in search of the medicine's secret ingredient. No one accompanied him and when he returned he had the object he had collected carefully wrapped and tied in a section of coconut fibre netting.⁵ This item was not placed in the basket but kept by the curer. Everyone then walked back to the middle of the island where they found the South district collectors already assembled and waiting. All the ingredients from both baskets were placed on a large mixing board and several young girls began to pound and mix the materials. Meanwhile two groups of older women began to roast and grate a number of ripe coconuts. This coconut meat was placed to one side where later it was squeezed for oil. At this time some additional men began to arrive, each bringing four green drinking coconuts from each estate of the island. These nuts were cut open and the water was poured into a large cauldron.⁶ When all of the coconuts were emptied portions of the chopped and mixed vegetation were collected from the mixing board and wrapped in coconut netting. Each of these containers was dipped into the cauldron and squeezed several times until all juices had been extracted. The coconut gratings were similarly wrapped and squeezed. And finally, the

Saufalachig curer soaked and squeezed the small packet that contained the secret ingredient into the mixture. He stirred the pot and waited until the surface stilled. Then he carefully observed the pattern formed by the charcoal-coloured coconut oil as it rose to the surface. The medicine was ladled into the left-over shells of the green coconuts that served as cups and passed around to those members of the community, generally seated in small family groups, who had gathered to consume it. The curer then informed everyone assembled of the divined meaning of the oil pattern he had observed. He stated that the pattern on the left side of the cauldron had been good and this indicated that the women of the island would not get sick; but the pattern on the right side of the cauldron was less encouraging, therefore the men of the island would have to take great care lest they catch *maselipig*. That evening everyone again assembled for a second dosage from the same cauldron. The next day there was a communal feast for everyone who had taken the medicine.

Summary. The prophylactic techniques described emphasize certain *dualistic and quadripartite divisions*: (1) The *peomas* is imposed for a minimum of four days. (2) Each estate contributes four drinking nuts for the *tafey Saufalachig*. (3) The ingredients for this medicine are gathered from each half of the island and carried in baskets plaited from two contrasting types of palm frond. (4) Two groups of women contribute roasted and grated coconut meat. (5) The curer's divination technique involves reading each half of the cauldron; the left side providing a prognosis for females and the right side for males. (6) The medicine is consumed on two occasions. One might also note that a specialist is called upon to prepare the medicine from a *secret* recipe. As will now be shown, similar principles guide the procedures of diagnosis and treatment.

Diagnosis

Diagnosis on Woleai and Lamotrek basically involves the identification of a specific or class of illness-causing *yalius* "ghost(s)" or "spirit(s)". This information is provided by a diviner. The patient, or someone on behalf of the patient, asks a *be* "knot" diviner to undertake this job. *Be* is a general divination technique based on the interpretation of a sequence of knots tied into strips of coconut frond pinnae (Girschner, 1912: 123-125; Lessa, 1959; Alkire, 1970: 13-16; Mahony, 1970). For his work in diagnosing an illness a diviner is compensated by the patient or his family with a gift. In modern times this compensation may be a payment of ten to twenty-five cents.

For the purpose of diagnosis the details of knot



Saufalachig medicine preparation, Lamotrek, 1962-63.

divination are as follows. The diviner takes a single frond pinna and strips in lengthwise with his thumbnail into four ribbons. He ties a random number of knots into each of these strips while reciting a chant directed to the spirits of divination that aid him in his diagnosis. The chant is in the form of a question asking if a particular spirit (or class of spirits), for example the spirit of *iloulimvaaiu*, is causing the sickness. If the omen is positive then the interpretation is that the named spirit or spirit class is in fact responsible for the illness. If the omen is negative, the diviner repeats the process and inserts a new name in the chant. Generally the diviner will not randomly proceed through the names of all known illness-causing spirits. Rather he approaches the problem in a more logical fashion, beginning with the names of those spirits that are known to cause those illnesses with the specific symptoms that have been described to him.

The omen is obtained at the end of the sequence

after all of the strips have been tied with knots. The diviner separates the strips into two pairs and proceeds to count the knots, in groups of four, on each strip. The residual number after the last group of four on each strip is the significant number for that strip. This number, which can be either 1, 2, 3, or 4, is grouped with the residual number from the other strip of the pair. In this way the diviner is left with two sets of two numbers; for example, 1:3 for the first pair and 4:2 for the second pair. There are a total of sixteen possible combinations for each pair, i.e. 1:1, 1:2, 1:3, 1:4, 2:1... to 4:4. Each of these combinations is named after one of the sixteen spirits that govern divination. And since the diviner is reading the permutation of two pairs there are a total of 256 possible combinations.

In the above example, the knot combination of 1 and 3 (for the first pair of strips) represents the spirit Lipul while the combination of 4 and 2 designates the spirit Ilufao. Many men on Woleai and Lamotrek who

are not fully qualified diviners are acquainted with the particulars of the system to this point, but only qualified diviners have mastered the two concluding steps, which are (1) the name of the mythological or legendary event associated with each of these spirit combinations, and (2) the omen (*maralibe*) derived from that even. In the example cited, Lipul and Ilufao calls to mind an event called *rangumag* and a good omen; that is, a positive answer to the question asked in the chant.

The diviner repeats this process four time in order to arrive at a reading that reliably identifies the spirit or spirit class causing the patient's illness. After the patient obtains this information he or she can approach a curer known to specialize in the necessary kinds of medicine.

Summary. Diagnosis of an illness depends on a system of divination that interprets a number of inter-linked dualistic and quadripartite combinations that in final analysis refer to combinations of the 16 spirits of *be*. Key segments of the system are secret and only revealed to individuals who undertake a course of study from a qualified diviner.

Classes of Illness

The main classes of illness on Woleai and Lamotrek are *temwaaicutat*, *iloulimwaaicu*, *gius*, *faiu*, *yalius*, *rius*, *yeolaw*, *yalu*, and *maselipig*. Each of these is subdivided into a number of more specific ailments and, in some cases, the latter are further subdivided. Space does not permit a complete listing, but the main divisions and subdivisions are as follow.

1.0 *TEMWAAIUTAT* "sickness from the sea". Illness of this class falls into two major subgroups:

1.1 sicknesses and injuries that result from activities *in the sea*; and

1.2 sicknesses that are contracted on land but which *emanate from the sea*.

There are two subdivisions of type 1.1:

1.1.1 *Yogotat* is an ailment that includes at least eight subtypes, each of which corresponds to a different kind of injury. Examples include punctures from fish spines (*igayugufalu*), eel bites (*saofanguyugu*), and jelly-fish stings (*limatongyugu*). One *yogotat* illness is less specific in origin and is descriptively called *yaramatutumailongmeletet* "person becomes sick after being in the sea".

1.1.2. *Gileiset* corresponds in subtypes to *yogotat*. The significant difference between the two lies in the underlying causes of the illness or injury. In the case of *yogotat*, which is thought to be the more serious, one is afflicted by the illness or suffers the injury because a taboo has been broken, most commonly the taboo that prohibits sexual intercourse before going fishing. In the case of *gileiset* one is

stricken by chance or owing to the random malevolence of some spirit.

'Sea illness' of type 1.2 is subdivided into three main types:

1.2.1 *Ngurungurutat* is characterized by asthmatic or respiratory problems, especially shortness of breath. The five subclasses of this disease are identified by specific accompanying symptoms, i.e. shortness of breath with coughing, or swelling of limbs, or rashes, diarrhoea, etc.

1.2.2 *Yogopotat* are illnesses that once again correspond to those of 1.2.1, but which derive from breaking taboos—in this case food taboos. One can expect to be struck down by *yogopotat* if one keeps an unfair share of fish, taro, or breadfruit. In the case of a male, one might also catch this disease if he covets large fish or if he secretly removes a fish from a canoe before the catch has been formally distributed.

1.2.3 *Morulap* "large testicles". This form of filariasis or elephantiasis is a "sea" sickness that also results from breaking prohibitions such as sexual taboos, theft, or wilfully disobeying a legitimate command.

2.0 *ILOULIMWAAIU*. These illnesses are abdominal, stomach and gastroenterological complaints.

2.1. *Bwolusag* "middle of the stomach" pain has five subdivisions with each corresponding to a more specific abdominal location.

2.2 *Siapungag* is characterized by general pain across the top of the abdomen.

2.3 *Piuriulel* is diagnosed if abdominal pain is accompanied by swelling.

Identification of particular types of *iloulimwaaicu* is often difficult for a curer to make. Thus the diviner might be called in again to provide a second more specific diagnosis.

2.4 *Mashupel* is a female complaint that is marked by an uninterrupted menstrual flow.

3.0 *GIUS* illnesses are those that are characterized by swellings and/or discharges. Some specific *gius* ailments are:

3.1 *Metagashem* "headaches" that are accompanied by sinus discharges and dizziness.

3.2 Nose bleeds.

3.3 Boils on the neck.

3.4 Boils on or discharges from the anus.

4.0 *FAIU* "stone" illnesses involve painful swelling of the joints. And, as was the case with *temwaaicutat* illnesses (1.0) there are two subdivisions. In this case, however, the subdivisions differ not only in underlying cause, but also in the *status of the individual afflicted*.

4.1 Ordinary *faiu* are subdivided into a number of more specific ailments, i.e. *bolagabuguwal* "knee

swelling”, *bolagpushapushalipushal* “ankle swelling”, etc. Arthritic and gout-like symptoms are usually classified as *faiu*. These types of *faiu* can strike adults of any age or either sex.

4.2 *Mwag* have the same symptoms as 4.1, but these complaints only afflict *senap* “canoe builders”. Canoe builders can be stricken by ordinary *faiu*, but ordinary people do not catch *mwag*. A canoe builder calls in a diviner to determine whether *mwag* or ordinary *faiu* is involved. Knowledge of the medicines that effectively treat *mwag* is usually only known to other canoe builders. A *senap* cannot treat himself; he must call in another knowledgeable *senap*.

5.0 *YALIUS* “spirit” illnesses are always directly related to the anger or malevolence of either a “sea” or a “thieving” spirit. The two primary divisions of these illnesses are differentiated by contrasting symptoms—psychological on the one hand and physical on the other.

5.1 *Sigalabusholag* “crazy” behavior results when an evil or thieving spirit possesses or steals an individual during a dream or while that person is walking about at night—most commonly through some uncleared or uninhabited area of an island. In such cases the individual manifests uncontrollable “crazy” behavior that is unknown to himself.

5.2 *Yalius* illnesses of a physical type are marked by headaches and severe weight loss. Tuberculosis, for example, is frequently defined as a *yalius* disease.

6.0 *RIUS* “fright” illnesses may also have psychological manifestations, but such symptoms are generally of short duration and clearly attributed to an unexpected and sudden shock. In addition, and in contrast to 5.1, one is aware of his or her behavior but is unable to control it. The physical symptoms of *rius*, which are more long-lived than the psychological, include fevers, chills, and swellings.

There are a wide variety of shocks or frights that can precipitate this illness. Those most frequently mentioned are such things as seeing a ghost, stepping on some unknown object at night, the unexpected death of a relative, and the shock of first sexual intercourse. *Rius* apparently can only be treated by female curers.

7.0 *YEOLAW* afflictions evidence themselves through a variety of internal pains and only divination can distinguish these from *iloulimwaaiu*. Most importantly, however, is the fact that *yeolaw* only strike navigators (*pelu*) and only navigators know how to treat them.

7.1 *Yealawlitat* “*yeolaw* of the sea”; and

7.2 *Yealawlifelu* “*yeolaw* of the island” are the two primary divisions of this illness. Informants were

unable or unwilling to provide details about these illnesses as this information was part of the navigator’s secret repertoire.

8.0 *YALU* only afflict infants and small children and the details of symptoms and treatment are known only to a few female curers on Woleai. During my fieldwork I was able to collect the names of several classes but have no further details:

8.1 *Yalubwo*;

8.2 *Yalupat*;

8.3 *Gosowaiwei*;

8.4 *Bush*;

8.5 *Gos*;

8.6 *Sari*.

9.0 *MASELIPIG* “influenza” which was discussed in the section on prophylaxis, is a common illness that is not consistently classified as traditional. Informants explained this by saying the disease is carried by the wind and originally “came from Yap”. Nevertheless, *maselipig* generally is treated by locally concocted medicines and other traditional techniques.

Summary. The people of Woleai and Lamotrek recognize nine major classes of illness. These classes are either named after a specific spirit believed responsible for an illness (e.g. *iloulimwaaiu*), after a place or locality where illness-causing spirits reside (e.g. *tat* “ocean”), or a class may be labelled by making direct or metaphorical reference to some outstanding symptom of the illness (e.g. *faiu* “stones”, *rius* “fright”). Even in this last case, however, there is the understanding that a ghost or spirit is ultimately responsible for the sickness. Most commonly an illness is caused by the activity of a malevolent spirit, but some sicknesses or injuries are either the result of an error or of some other behavior on the part of the stricken individual that has offended a spirit.

When one examines the range of symptoms and related characteristics that are associated with each of these nine classes of illness, four additional generalizations are suggested: (1) *The same illness may manifest itself through different symptoms.* Symptoms as diverse as wounds and abrasions on the one hand, and infections on the other, can denote the same class of affliction. (2) *Identical symptoms may signal different illnesses depending on the class or status of the person afflicted.* For example, some diseases that strike “canoe builders” or “navigators” have identical symptoms to other diseases that afflict ordinary non-specialists within the society. Similarly, diseases caught by children or infants fall into a separate class from those that attack adults. In some of these cases treatment must be sought from curers of a status that is comparable to that of the patient. (3) *Different subdivisions of the same illness can have identical symptoms.* In such cases one must put extra effort into identifying the specific

spirit causing the sickness if one is to classify and treat it properly. And finally, (4) dualistic divisions that emphasize the contrast of land or sea as the place of origin for an illness appear in several contexts.

Medicine Treatment

After an illness is identified by the diviner the patient, or someone on his behalf, approaches a recognized curer for that type of sickness. The curer generally agrees to help and he or she is paid for the service at the conclusion of the regimen. Payment usually is in the form of woven skirts or loincloths (*toer*).

A number of procedures are involved in any *tafey* treatment. In addition to the preparation of the appropriate medicines the curer must recite specific chants at various stages in its preparation and administration. Many of these chants are encoded using archaic words that few people currently understand. Frequently medicines are collectively consumed in a manner similar to that described for the prophylactic *maselipig* medicine; that is, the medicines are not only taken by the sick person but also by close relatives and attendants who are especially concerned about the recovery of the patient. A curer frequently imposes food taboos on a patient, his relatives and attendants.

TABLE 1
Relationships of Illnesses, their Origins and Treatment on Woleai and Lamotrek

Type of Illness (Primary Symptoms in Parentheses)	Place of Origin of Illness	Classes of People Afflicted	Primary Ingredients of Medicines and/or other Features of Treatment	Associations noted between Illness and Treatment
1.0 <i>Temaaiutat</i> (respiratory complaints; filarial swellings; "sea" injuries, i.e. bites, abrasions, punctures)	sea	all	<i>Scaevola</i> , <i>Vigna</i> <i>Papaya</i> , <i>Morinda</i>	Strand species (homotopic); homeomorphic to swellings
2.0 <i>Iloulimwaaiu</i> (abdominal swellings and/or pain; in females menstrual pain or uninterrupted bleeding)	most often land	all	Interior and swamp species; food crops	homotopic; deep interior analogy; food/stomach
3.0 <i>Gius</i> (pustular swellings; boils; sinus discharges)	most often the sea	all	strand species; <i>Crateva</i> vapour; rough, bumpy objects	homotopic; homeomorphic; sea/surface/skin
4.1 <i>Faiu</i> (joint swellings; arthritic & gout-like pain)		all	Coral stones; knots and burls of trees	homeomorphous
4.2 <i>Mwag</i> (as above)		<i>senap</i> (canoe builder)	Treatment by other canoe builders	homologous class/status
5.0 <i>Yalius</i> (headaches; severe weight loss; psychotic behaviour)	sea/land	all	<i>Cordia subcordata</i> sea/land vegetation	homotopic, "of the land but from the sea". Sea/land linkage.
6.0 <i>Rius</i> (fright with fevers, chills; swellings)		all	"Surprised grasses"; sea/land ingredients	homologous type/class
7.0 <i>Yeolaw</i> (abdominal pains)	sea/land	<i>Pelu</i> (navigators)	Treatment by other navigators	homologous type/class
8.0 <i>Yalu</i> (fever; loss of appetite; crying in infants & children)	sea/land	infants, children	Female curers	mother/child linkage
9.0 <i>Maselipig</i> (influenza symptoms)	Yap via the winds across the sea	all	<i>Areca</i> from Yap; smoke; secret sea ingredient in prophylaxis	homotopic; homeomorphic (wind: smoke)
10.0 Breaks, sprains internal trauma		all	Massage	homologous class (tree fallen fruits prohibited)

Some common prohibitions of this type include *mwarefash* "surgeonfish", *iur* "*Panulirus* lobster" and *gishgish* (an unidentified fish). The first two are forbidden to the patient for one year and the last for the rest of his or her life. Relatives and attendants who partake of the medicine are required to avoid these foods for four days.

Every illness has one or more medicines that can be compounded as treatment. Again space and the available field data do not permit listing a complete pharmacopoeia, but representative examples of these medicines can be given (see Table 1 for summary and their relationship to specific illnesses). Vegetation provides the base material for most medicines. The inhabitants of Woleai and Lamotrek subdivide all vegetation into three classes; specifically, strand species, interior species, and swamp species (Alkire, 1974).

1. *TREATMENT OF TEMAIIUTAT*. The prescription varies depending on the type of "sea" illness that has been diagnosed, but in every case there is a four-step core regimen that accompanies the individualized treatment.

(1) A mixture of *belagaliniut* "part of a *Scaevola taccada* flower", *shapilagiop* "base or stem of *Crinum* sp." that is pounded and strained through coconut cloth into the water of a *gurupliliugaraorao* "green coconut". A small amount of *gapagap* "coconut oil" is added to this and the liquid is drunk once a day for two or four days.

(2) Two or four *shapilashalusholniut* "leaf stems of *Scaevola taccada*" and two or four *siaboluniut* "central leaves of *Scaevola taccada*" are pounded and wrapped in coconut fibre cloth and then strained into the water of a green coconut. This mixture is ingested four times.

(3) Scrapings from the trunk of a *yar* tree "*Premna obtusifolia*" and one handful of *Vigna marina* are pounded, wrapped and strained into the water of a green coconut and consumed.

(4) One handful of blossoms from *Scaevola taccada* and one handful of decayed leaves from the same plant are crushed and added to coconut water and drunk by the patient.

Scaevola taccada is the basic ingredient in three of these mixtures and *Vigna marina* in the fourth. Both are classified as strand species. Some *temaiiutat* illnesses are accompanied by swellings. These are treated with a poultice made of papaya blossoms that have been wrapped in *Morinda citrifolia* leaves and roasted. The poultice is held in place by green *Morinda* leaves. The fruit of the *Morinda citrifolia* has small nodules on its surface.

2. *TREATMENT OF ILOULIMWAAIU*. A medicine of four basic ingredients is concocted that includes

breadfruit "knots", a cutting from a breadfruit tree, an unfurled leaf of a banana plant, and leaves from an *Ixora casei* plant. All of these are interior species. This medicine is consumed morning and evening for four days.

There are a number of other medicines that can be prepared for specific varieties of *iloulimwaaui*. One of these is the *iloulimwaaui liulap* "the *iloulimwaaui* great medicine". *Liulap* is a term for the most powerful or most important medicine that may be prescribed for a particular sickness. This particular "great medicine" is concocted from a comparatively large number of ingredients, including parts of the following species: *Artocarpus altilis* (breadfruit), *Eugenia javanica* (mountain apple), *Cocos nucifera* (coconut), *Musa* sp. (banana), *Ixora casei*, *Premna obtusifolia*, *Guettarda* sp., *Cordia subcordata*, *Morinda citrifolia*, and *Saccharum officinarum* (sugarcane). All of these are classified as interior species. The *liulap* also includes the following swamp species: *Cyrtosperma chamissonis* (taro), *Rhizophora mucronata*, *Ludwigia octovalvis*, *Cyperus brevifolius*, *Polygonum minus*, *Curcuma* sp., *Ocimum canum*, and *Hedychium coronarium*. One should note the large number of domesticated food species and swamp species included. Apparently an association is drawn between internal/abdominal/stomach complaints and food species/swamp species.

3. *TREATMENT OF GIUS*. Boils and swellings are treated with a number of different medicines. Most are salves or poultices that are applied to the afflicted area. First, a dressing is made from the base of a coconut and applied for four days. This is followed by an application of *Tournefortia argentea* leaves for four days. Next some leaves of *Hibiscus tiliaceus* are applied and if the ailment persists, a medicine made from the leaves of *Cassytha filiformis*, *Barringtonia asiatica*, *Tournefortia argentea*, and *Wedelia biflora* is administered for four days. Most of these plants are strand species. Boils are also treated by lancing. When *gius* is manifested through headaches, sinus discharges or a bloody nose, the affliction is treated by inhaling the vapour given off by *Crateva* sp. leaves as they are cooked.

4. *TREATMENT OF FAIU*. Two steps are usually followed in the treatment of *faiu*. The first is consumption of medicine and the second is application of a mixture to the swollen or painful area.

The medicine that is consumed is made from two basic ingredients: bark rubbings taken from opposite sides of two branches (of an unidentified type of tree) mixed with the pulverized powder of two small coral stones that are collected from the main path of the island. These are added to the water of a coconut and drunk morning and evening for four days.

The externally applied mixture is made from green moss scraped from several coral stones. The scrapings are placed on a *Morinda citrifolia* leaf and roasted on a fire, and then the cooked material is applied to the afflicted area and covered by another *Morinda* leaf. The ointment is renewed morning and evening for four days. A second type of ointment might also be made that is prepared from scrapings taken from the burl of a *Crateva sp.* tree.

5. *TREATMENT OF YALIUS*. Sea spirits are the type that most commonly cause *yalius* illnesses. The standard remedy is prepared from the base parts of two dried and two green *Cordia subcordata* leaves mixed with water. This is consumed morning and evening for two days. *Cordia* is an interior species, but it is a plant that is said to have originally come from the sea (Alkire, 1974:3).

A second medicine useful in the treatment of *yalius* illnesses has *walawalagalanatuwei* "leaves or grass from the end of the path that leads from one's house to the lagoon bathing area" as its basic ingredient. This medicine also contains the stem of a *Cyrtosperma* taro plant. These ingredients are pounded, mixed with coconut water and consumed morning and evening for four days.

The third most common type of medicine that is prescribed for *yalius* is made from two small chips of wood cut from opposite sides of a coconut palm. These are pounded together with a leaf of seaweed taken from a shallow area of the lagoon reef. This mixture is added to water and drunk morning and evening for two or four days.

6. *TREATMENT OF RIUS*. As mentioned, only female curers know how to prepare medicines for *rius*. One concoction is made from *Ipomoea littoralis* vines that are pounded and added to the water of a "red" coconut. *Ipomoea* is an interior species of vegetation. The liquid is consumed for four days. A second medicine is a combination of the bark and four yellow and four green leaves from a *Cordia subcordata* tree plus *Ipomoea* vines. All ingredients are added to coconut water and ingested for four days. This type of medicine can have added to it a handful of *pigul* grass that has been gathered after "running up and surprising it".

7. and 8. *TREATMENT OF YEOLAW AND YALU*. No information was collected regarding the treatment of *yeolaw* afflictions. In part, this was owing to the secret nature of such data. Similarly, very little was gathered concerning *yalu* medicine, but that which was collected exhibits some interesting features.

Tutusari "children's sacks" is a medicine made by the female curer during the last quarter of the moon. The curer enters the taro swamp after she has

decorated herself with *ubut* palm frond garlands, headbands, and armbands. She is usually accompanied by several assistants. When this group reaches the taro swamp the curer begins a dance and recites chants after which she pulls several handfuls of grass from the ground in the area of her own moon shadow. This grass is passed on to her assistants. The party then walks to the lagoon shore of the island and the curer repeats her activities, taking several handfuls of shore grass from her moon shadow. The grasses are mixed and pounded and wrapped in 100 small *iul* "bags", each of which is closed by tying with *ubut* fronds. These sacks or bags are given to the family of the sick child and the ingredients are mixed with water by these individuals to obtain a medicine.

9. *TREATMENT OF MASELIPIG*. "Influenza" is treated in a series of five steps. First, the centre leaf from a three-leaf cluster on an *Allphylus timorensis* tree (interior species) is pounded and drunk with coconut water morning and evening for one day. Second, some *Polypodium scolopendria* (interior) vegetation exhibiting rust or spores is mixed with coconut water and drunk morning and evening for one day. Third, an immature leaf and a root section from an *Areca catechu* (an interior species "originally from Yap") are pounded and added to water and drunk, morning and evening for one day. One should recall that *maselipig* itself is said to be a sickness from Yap that often comes with the wind (cf. Burrows and Spiro, 1953: 219). Next the stalk or stem of a *Hernandia sonora* (interior) is pounded and mixed with water and consumed for a single day. And finally, a *gobas* "smoke" treatment is used. A fire is built in front of the patient's house and the leaves of *Eugenia javanica*, *Allphylus timorensis*, *Piper fragile*, and *Polypodium scolopendria*, all of which are interior species, are placed on it. Smoke from this fire is allowed to enter the house and engulf the patient. *Maselipig*, an illness that is brought to the island by the wind, is thus treated with smoke that is carried by the breeze into the patient's house.

Summary. On Woleai and Lamotrek medicinal preparation and curing techniques are to a large extent domains of specialized and guarded knowledge. Secret ingredients and chants that are coded in esoteric words are two means by which such information is protected. Some curing techniques, in fact, are only known by navigators and canoe builders—men who are renowned for the repertoire of secret knowledge they possess. Dualistic and quadripartite divisions once again are common: medicines are consumed for four days, or twice a day for four days, or in sequences of four medicines interlocked in a four-day sequence. Medicinal ingredients are combined in various pair formulae, for example, two dried and two green leaves or scrapings taken from opposite sides of a tree. Sea/

land dichotomies are also common: illnesses from the sea are treated with medicines that have basic ingredients from the sea or strand areas, while land diseases are treated by medicines concocted from interior species of vegetation. In some instances care is taken to link the interior with the exterior or the land with the sea, i.e. grass taken from the taro fields and grass taken from the beach, or stones selected from the path that links an inland dwelling with the lagoon beach.

Massage Treatment

Massage (*sheosheo* or *waag*) is a well developed curing technique on Woleai and Lamotrek. It is invariably used to treat bone fractures, muscle strains and trauma to internal organs. Massage may also be prescribed for those of the aforementioned classes of illness that are marked by internal pains and/or swelling.

Anyone who breaks a bone or strains a muscle will contact a masseur directly in order to secure treatment, while someone who is experiencing internal pains may be directed to the masseur by the diviner used to diagnose the ailment.

A masseur, whether male or female, is highly respected. There are two terms used for this type of specialist. The first is basically descriptive, *tausheosheo* "massage person". Symbolically, the second is more revealing, *peluallifelu* "the navigator on the island". A *pelu* "navigator" is the most highly respected specialist in central Carolinian society. His success depends on aid he receives from patron spirits and on his mastery of extensive ritual and technical knowledge. The masseur—like other curers—is also aided by various spirits and must master many ritual details. However, the analogy that is drawn through the use of the label *pelu* is in the area of technical expertise. The navigator's success depends on his ability to visualize mentally an unseen objective—the island that lies over the horizon—and to know what actions to take to reach that objective safely. The objects the masseur works with are equally invisible—internal organs and broken bones—and because of this masseur must decide on a course of action based on a mental picture of this unseen domain.

There are either regional differences, or perhaps two schools of massage, because the anatomical models used by informants on Lamotrek differ from those used on Woleai; the Lamotrek model is the most elaborate. In this latter case, the masseur conceives of the trunk of the body as divided by seven parallel vertical lines and on each of these are found a number of pressure points (Figure 1; also see Alkire, 1965: 126-127). The central line begins at the base of the neck, at a point called *fachutura*. From there it runs through the navel (*lug*) to its termination at *bungiumat*

in the region of the ischium. In all, there are ten pressure points on this line. To each side of the central line there are three others and on each of these are found nine pressure points. Thus, there are a total of 64 reference points distributed along seven vertical lines. Massage may also be applied diagonally between these points. Similar points are located on the head, neck, arms and legs. This anatomical model, based on points and intersecting lines, further emphasizes the analogy drawn between navigators and masseurs for it bears a strong schematic resemblance to some of the mnemonic navigational charts of the central Carolines (Alkire, 1970: 40-56).

The procedures used by a masseur can best be illustrated by making reference to a specific case, for example a man injured in a fall from a tree. The masseur is immediately summoned and when he arrives he places some *Premna obtusifolia* leaves on the chest of the victim while reciting a chant seeking the aid of the spirits. With the help of one or two assistants the masseur "straightens" the patient by pulling at his armpits while the injured person's hips are held in

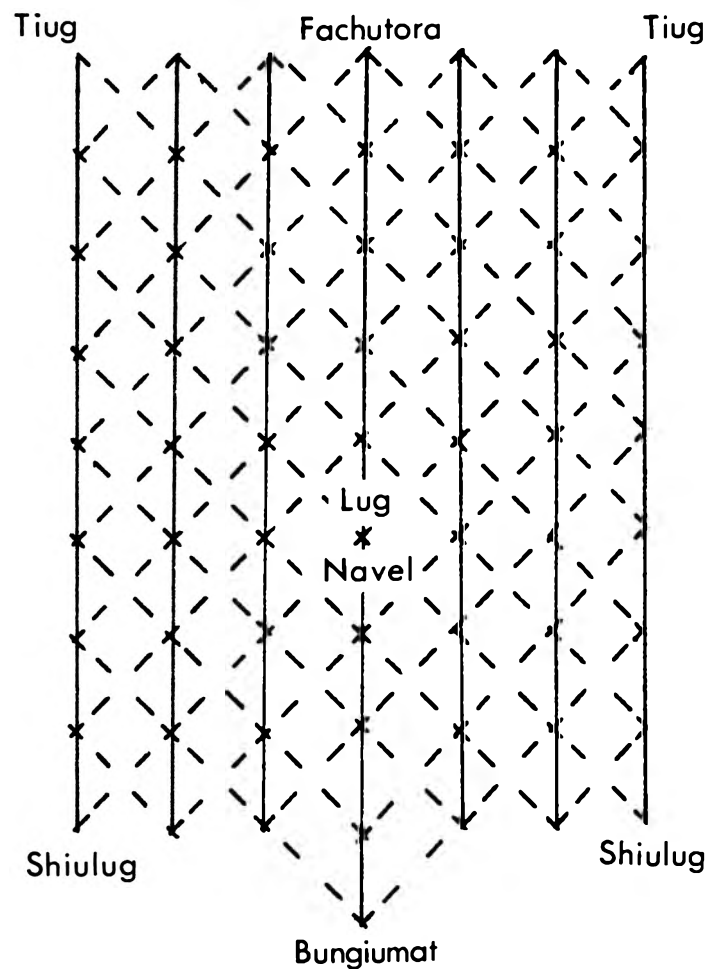


Figure 1

place. With slight variations, this procedure is repeated three more times. The masseur might decide to move the victim to the lagoon for the straightening and if so the patient is suspended in the water while worked on. After straightening, the injured man is carried to his dwelling for further treatment.

As soon as the victim's relatives hear of the accident they proceed to his house bringing gifts for the masseur and the spirits. These are hung from the rafters around the room. If the number of gifts is small the spirits will be angry and a cure will be difficult.

If the injuries are severe the masseur may decide that the patient's movements be restricted and for this purpose a restraining framework of sticks and cords is built over and around the patient. This framework is left in place for a minimum of four days, although it is temporarily removed when the masseur is treating the patient.

Coconut oil is applied to the victim's body before massage begins. If there are broken ribs these are set by massage along the diagonal reference lines of the trunk. The vertical lines are used for other types of injuries. Broken arms or legs are set and splinted and medicinal vegetation is usually placed inside the splints before they are bound in place. Injuries to internal organs are first massaged using the points and lines mentioned, but in some cases the masseur may have to insert his fingers in the anus for more direct treatment.

The masseur recites twelve chants during his work. The first three are given as he ties sacred *ubut* fronds on his wrists, and around his head, and then on his assistants. The fourth chant is repeated four times with each of these recitations directed to a different corner of the house. The fifth is chanted as the mat on which the patient is placed is prepared. This mat is covered with a second one (or a piece of cloth) and the sixth chant purifies this covering. The seventh chant calls the attention of the spirits to each of four *Premna obtusifolia* leaves that are placed at the corners of the mat. The eighth chant is recited as the masseur first presses on the abdomen of the patient and the ninth during the subsequent course of his work. The tenth chant occurs at the end of the treatment. The patient is given some medicine to drink and the eleventh chant is recited while this is ingested. The final chant in this series occurs just before the masseur leaves and as he waves a *Premna obtusifolia* stick over the patient. The medicine that the masseur prescribes is a concoction of pounded *Premna* leaves mixed with the water from small green coconuts. An ointment may also be applied to the injured area and it is manufactured from the leaves, stems, or roots of some or all of the following: *Piper fragile*, *Canavalia cathartica*, *Vigna marina*, *Morinda citrifolia*, *Hibiscus tiliaceus*, *Hedyotis biflora*, and *Allphylus timorensis*. If used, this medi-

cine is applied morning and evening for four days.

The masseur may recommend that a prophylactic ritual be held to protect the other men of the island from similar accidents. This ritual is held in one of the canoe houses. As it begins the masseur chants to the spirits, asking that the assembled men be protected from injury. All members of the group consume a feast of breadfruit and taro, contributed by the women of the various estates of the island, and fish that the men have caught and cooked. All this food is consecrated with a chant by the masseur. Four plates of this food, called *gak*, are sent to the estate of the injured man and the old women who live there consume it. No men are permitted to eat these special portions for fear that they would be injured by falling from a tree if they did. The patient, the masseur, his assistants and all who have participated in the above ritual are prohibited from eating or drinking any coconuts that have been opened by cutting away the husk at one end of the nut, or from eating breadfruit that has broken open as a result of falling from a tree.

After the first four days of treatment the masseur may use the patient as a model to instruct his apprentices. For this purpose he uses red dye to mark the pressure points on the patient's body as he names each; the apprentices repeat each name. The masseur also demonstrates the correct massage techniques for various types of injuries. No outsiders are permitted to observe these teaching sessions.

The food taboos imposed during treatment are continued in a slightly altered form after recovery. Anyone who has undertaken treatment by massage must thereafter only eat these prohibited foods alone or in the company of others who are under similar restrictions.

There is a *liulap* "great medicine" that is frequently prescribed by a masseur for those suffering from internal pains and swellings that are not the result of physical injuries. This medicine is made from the roots and stems of *Hibiscus tiliaceus*, *Cordia subcordata*, *Premna obtusifolia*, *Guettarda speciosa*, *Morinda citrifolia*, *Saccharum officinarum*, and the leaves or vegetation of *Musa sp.*, *Piper fragile*, *Cyperus brevifolius*, *Curcuma sp.*, *Cyrtosperma chamissonis*, *Ludwigia octovalvis*, and coconut oil. This elixir is drunk twice a day for four days.

Summary. Curing by massage is a specialization based on a systematized anatomical model. The masseur carefully guards his knowledge and trains apprentices under controlled circumstances. Dualistic, quadripartite divisions and multiples of four, up to sixty-four, are used to organize the particulars of this domain. Some homologous associations are drawn between types of injuries and kinds of food taboos that are imposed on a patient. Numerous chants and gifts are offered both to the patron spirits

of *sheosheo* and to other “good” spirits as one means of soliciting their aid in effecting a cure.

Conclusions

On Woleai and Lamotrek three sets of spirits operate in the domains of illness and curing: illnesses and injuries are caused by malevolent or angry spirits; diagnosis depends on messages received from the spirits of divination; and recovery is achieved with the aid of patron and “good” spirits. There are also three kinds of specialists that work in these domains: diviners diagnose illnesses; medicine curers treat most infectious ailments, wounds and abrasions; and massage curers treat broken bones, sprains and internal traumas.

Given this large cast of personae, there are many ways in which curing failures can be explained. For example, a patient might not recover because he or she continues to violate important taboos or fails to consume a medicine in the prescribed way; or the *be* spirits may have been mischievously misled so that they provide an incorrect diagnosis; or the relatives of the patient may not have offered a sufficient number of gifts to the “good” spirits who aid in any cure; or the *tafey* curer may have omitted an important ingredient or forgotten a chant that is considered essential by his patron spirit. Thus, given all of these variables, it is easy for a curer to refer a patient back to a diviner for rediagnosis without losing face. And it is equally easy for the diviner to refer the patient to another type of curer. Such procedures maximize the chances of a cure since the patient eventually will be treated by a number of different specialists in a number of different ways (Figure 2). In those cases where all procedures fail it is also difficult to assign blame. In any case, both of these organizational features—the compartmentalization of causes and specialties on the one hand and the well developed channels for referrals to other specialists on the other—have probably contributed to the persistence and stability of the system.

Dualistic and quadripartite divisions are clearly guiding principles for organizing curing on Woleai and Lamotrek. In earlier publications the importance of these principles has been noted in other ritual domains, in all systems of measurement, and in the territorial divisions of Lamotrek and Woleai polities (Alkire, 1965, 1968, 1970).⁷ Lineality and locality were also found to be themes that were emphasized in Woleaian systems of measurement (Alkire, 1970: 2). The data discussed in this essay provide additional confirmation for these conclusions (see Table 1).

On Woleai and Lamotrek emphasis on locality is apparent in the way illnesses are dualistically categorized as either of the land or of the sea. In addition,

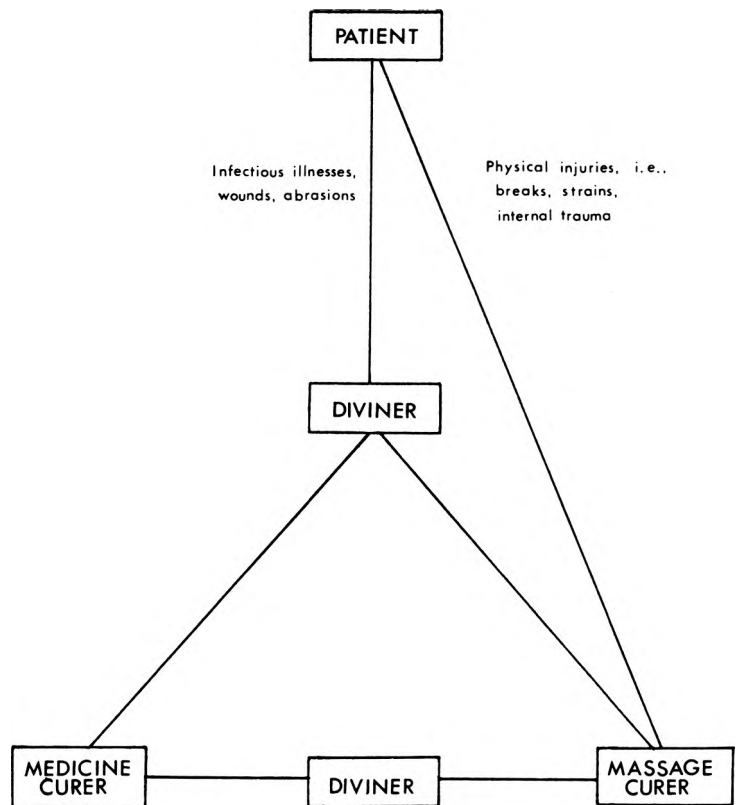


Figure 2

principles of locality and duality underlie methods of treatment. This is seen in the consistent emphasis that is placed on homology in medicinal treatment. Phrased another way, the emphasis is on a same/different dichotomy. Illnesses of the sea are treated with medicines primarily made of ingredients that come from the sea or the strand (that part of the land closest to the sea). Similarly, illnesses that have their origin on land are treated with medicines concocted from interior ingredients. One might label this a *homotopic* theory of treatment in that the medicines must come from the *same place* as the illness. This principle also obtains in the case of *maselipig*, which is classified as a “foreign” disease. This illness is said to have come from Yap carried by the winds over the sea. Consequently, it is treated with medicines that have *Areca* as a base ingredient—a Yapese interior plant—and by smoke that is carried by the wind into the dwelling of the patient.

Yalius illnesses are caused by spirits that move between the sea and the land. The ingredients for medicines used to treat “spirit” ailments frequently reflect analogous movement. For example, pebbles or grass that have been taken from paths that link the sea and the land or *Cordia subcordata*, an interior species but one whose seeds arrived on the island “from the sea”. In the case of *iloulimwaaiu*, one can note another variation of this homotopic principle. *Iloulimwaaiu*

abdominal/stomach complaints are treated with medicines made from swamp species and food species. The deep interior of the body is treated with ingredients taken from the deep interior of the island; and the stomach is treated with food species.

Medicines are also compounded from ingredients that exhibit outward similarities in form to the disease they are meant to treat. The medication used to treat boils and pimples includes extracts from "bumpy and rough" fruits, seeds or stones; swellings are often treated with scrapings or cuttings taken from the knots and burls of trees. In Table 1 such instances are labelled *homeomorphic*.

Final examples of the importance of a homologous principle are seen in those cases where medicines are prepared from ingredients, or administered by curers, that are conceptually of the same class or status as the patient. "Fright" illnesses are treated by grass that has been "surprised" when gathered; navigators suffering from *yeolaw* can only be ministered to by other navigators; and canoe builders who are afflicted with *mwag* depend on other *senap* for treatment. An analogy emphasizing homologous status or type is also drawn in massage treatment whereby fallen breadfruit is forbidden to patients who themselves have been injured in a fall from a tree.

In conclusion, then, several of the principles previously proposed as basic to Woleai and Lamotrek systems of organization are manifested in this analysis of ethnomedicine. These are duality, quadripartite divisions and locality. But in addition, these principles are clearly interwoven with an emphasis on homology of form, type and locality.

NOTES

* The author wishes to thank N. Ross Crumrine for his helpful comments on an earlier version of this article and James Arthurs for preparing the French abstract.

1. The ethnographic data presented in this chapter were gathered on Lamotrek in 1962-63 and on Falalus and Wottagai, Woleai in 1965. Reference to Woleai in the text specifically refers to these islands of the "Western Lagoon" of the atoll. Some supplementary data were gathered during re-visits to the atolls in 1975-1976. This field work has been supported by grants, respectively, from the U.S. National Institutes of Health, the U.S. National Science Foundation and the Canada Council.

2. Native terms are rendered, wherever possible, according to the orthography established by Sohn and Tawerilmang (1976). In many cases this orthography differs from that used in earlier publications.

3. Preparation of this type of medicine was discussed, in a different context, in Alkire, 1965: 68.

4. In more recent years (since conversion in 1953) traditional chants are often replaced by short Roman Catholic prayers.

5. Coconut netting is the cloth-like fibre found encircling a palm in the area where the fronds emerge from the trunk of the tree.

6. This steel cauldron was a large rice cooker that had been left on the island by Japanese military personnel at the end of World War II.

7. One might also note that some of the details of dualistic emphasis on Woleai and Lamotrek bear resemblance to manifestations of this principle in other areas of Oceania, e.g. Fiji (Hocart, 1952: 57; Sahlins, 1976: 28). Parallels such as these may have value in reconstructing the culture history of this part of the Pacific over and above the interest they have in clarifying the structural logic and consistency of individual systems.

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