

SOUTHERN KWAKWAKWATL MEDICINE

by

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forms a basis both for gathering and organizing data on Southern Kwakiutl culture into analysable units and for tracing the relationships between these units.

In the second step, Southern Kwakiutl medicine is divided into preventive medicine, analgesic practices, surgical practices, the treatment of burns and injuries, and the handling of ailments and significant illnesses. The technology and techniques, social organization, and ideology associated with these divisions of medicine are reconstructed using the available ethnographic data.

In the third step, ethnographic information is used to reconstruct the articulations which existed between medicine and the rest of Southern Kwakiutl culture in terms of technology and techniques, social organization, and ideology.

The results of the reconstruction indicate that the divisions within the field of Southern Kwakiutl medicine were linked together by some shared techniques and technological items, key symbols and underlying beliefs, but there was no single uniform organization of specialists. Medicine articulated with the rest of the culture in the areas of economics, politics, and the religio-ceremonial sphere.



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## 1. INTRODUCTION

This thesis deals with the field of medicine in the Southern Kwakiutl culture of the Northwest Coast of North America. As yet, very little work has been done that is specifically concerned with the study of medicine on the Northwest Coast. The purpose of the present study is to salvage data from early ethnographies and reconstruct what is known of the medical sphere and its possible relationship to other aspects of Southern Kwakiutl culture in order that a beginning can be made in filling this gap in our knowledge.

Of the work on Northwest Coast medicine that does exist, Barbeau's fragmentary recorded statements from Haida and Tsimshian shamans (1958) tell little of the rest of the medical practices or culture of either of these two groups. Large's account of Bella Bella medicine (1968) and McKechnie's account of pre-contact medicine on the Coast (1972) add little information of value and reveal the authors' skepticism and tendency to dismiss all aspects of native medicine as quackery.

### 1.1 Statement of the Problem

The main problem that will be treated is that of reconstructing the practice of medicine by the Southern Kwakiutl in the post-contact period and suggesting how it articulates with the rest of Southern Kwakiutl culture.

However, there are subsidiary problems that should be dealt with as steps towards resolving the main problem:

1. Since a survey of the anthropological and sociological literature relevant to medicine revealed no appropriate models, the first problem faced in the thesis will be to construct an analytical model that will make it possible to examine not only the form and articulation of the parts within the sphere of medicine, but also the relationship of medicine to other areas of Southern Kwakiutl culture.

2. After developing the basic model, the problem of reconstructing the parts of the medical sphere of the culture may then be dealt with.

3. Having reconstructed the field of medicine itself, the next problem will be to determine those articulations and relationships which exist between medicine and the rest of Southern Kwakiutl culture (Southern Kwakiutl medicine's socio-cultural environment). Since Southern Kwakiutl medicine appears to bear marked affinities to the religious and ceremonial spheres, it will be useful to examine the nature of their relationship, as well as the articulation of medicine with such areas of the culture as those of kinship, economics, politics, and so on.

### 1.2 General Methodological Considerations

As has been noted, a survey of the relevant anthropological and sociological literature indicated that there seem to be no appropriate analytical models of complete medical systems. Previous studies of traditional medicine have not made use of specific or rigorous models. In the

main, studies have been concerned with the recording of data on medical or medico-religious systems. The frameworks used have often been devised by the ethnographer to suit his material and rather than being expressly stated have often been implicit in the presentation of the data.

Here the approach will be somewhat different. Instead of constructing the medical sphere of culture from observations in the field, it will be reconstructed from ethnographic data collected earlier by others. Rather than using an unstated framework to organize data, a deliberate program of model-building will be undertaken to aid in the analysis and presentation of a body of information which is extensive but lacks organization.

Although much of the information on the Southern Kwakiutl was collected in the post-contact period of the late 1800's and early 1900's, the thesis will concern itself with reconstructing what is known from the data of the response of the Southern Kwakiutl to illness. The matter of the people's response to diseases introduced into the environment by Europeans will be touched upon. However, the impact of Western medicine itself on the indigenous practice of medicine is beyond the scope of this study.

Methodology is more fully discussed in the following section, but it should be noted here that the three subsidiary problems outlined above will be used as the steps in arriving at a solution to the main problem.

Before turning to the matter of the form and quality

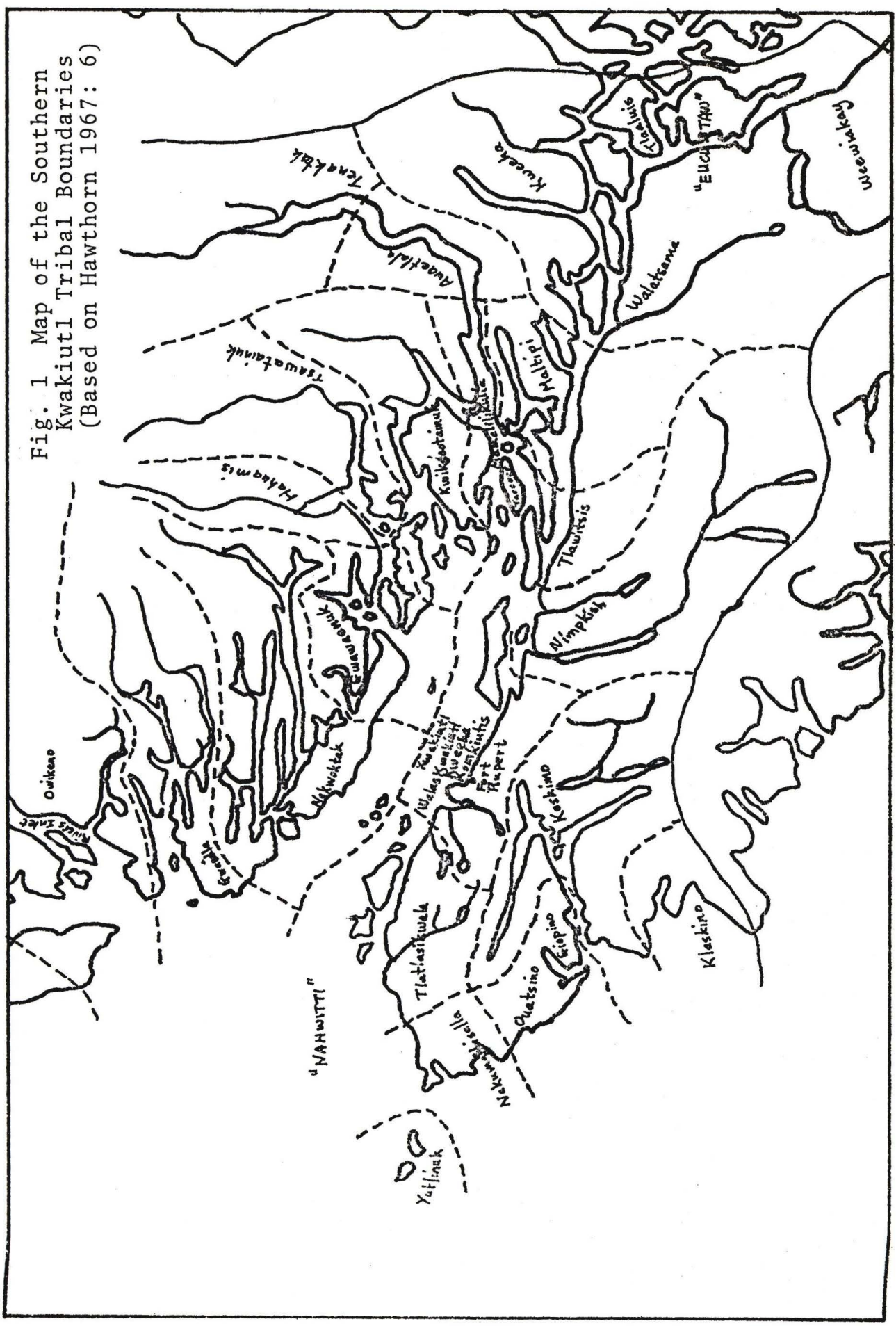
of the ethnographic data, it is necessary to comment briefly on the place of medicine in a culture. Seijas (1973: 544-545) has pointed out that in the past it has been common practice for anthropologists to include the medical domain of culture under the heading of religion, magic, or witchcraft. It is true that medicine often shares elements with religion and ceremonialism. However, it is equally important that its empirical, "rational" aspects not be lost sight of. For this reason it may be useful to view medicine as a category of behaviour in its own right encompassing both religious and scientific elements.

### 1.3 The Southern Kwakiutl

The Southern Kwakiutl have been perhaps one of the most intensively studied cultural groups in the field of anthropology. The body of ethnographic data is voluminous. Since most students of anthropology have encountered some of this data in the course of their studies, it should not be necessary to dwell at great length on a description of the Southern Kwakiutl at the outset.

The Southern Kwakiutl, speakers of a language of the Wakashan family, occupy the north end of Vancouver Island and the adjacent mainland coastal area (Fig. 1). The Kwakiutl branch of the Wakashan family is generally divided into three groups: (1) the Haisla; (2) the Heiltsuk (Bella Bella); and (3) the Southern Kwakiutl. It is with the local groups who speak dialects of Southern Kwakiutl that we are concerned.

Fig. 1 Map of the Southern Kwakiutl Tribal Boundaries (Based on Hawthorn 1967: 6)



The largest cohesive unit of social organization was the local group or tribe, of which there were twenty to twenty-five. Members of a local group occupied a winter village. The local group organization was involved in marriage, potlatching, and "the shared conception of rank on an intertribal level" (Rosman and Rubel 1971: 129).

Two of the groups, the Kwagul of Fort Rupert and the Leqwildax, appeared to be aggregates of local groups which could potlatch to one another in intratribal potlatching.

Local groups and sub-groups were divided into descent groups called numayms or numemots. The smallest social unit was the household, with each numaym occupying one or more houses in the winter village. In the winter all the numayms of a local group occupied the winter village, but in the summer they dispersed to the fishing grounds, hunting lands, and berrying grounds held by the individual numayms.

Affiliation of a member with a numaym was generally through the principle of ambilateral descent and transmission of numaym property was ambilateral (Hazard 1960). The rule of succession to ranked positions and their associated names was clear cut. The position and the name were passed by the rule of primogeniture to the first-born child, regardless of sex---a rule of succession fitting the ambilateral principle (Rosman and Rubel 1971: 131-138).

Much of the early ethnographic information was collected by or under the supervision of Franz Boas in the early part of this century. This is the material on which we will have

to rely most extensively, supplemented by data collected by Curtis and by more modern material gathered by Drucker, Codere, and Ford.

It is important that Boas's data be approached with both eyes open. A large part of what Boas published was collected by his assistant and principal informant, George Hunt. Unfortunately, the collection and presentation of ethnographic data was sometimes flawed by Boas's reliance on paid informants who were few in number and by his failure to note the needed correction of inaccuracies in his early reports in his later publications. However, perhaps the most significant difficulty from the point of view of this thesis, was summed up by Rohner, in his volume of Boas's collected letters and diaries in which he writes, "Boas was less concerned with what people do than with what they say they do or say they should do" (Rohner 1969: xxiii).

## 2. MODELS

Generally speaking, models act as representations of structure. The type of model chosen depends on the purpose it is intended to serve. For instance, if we are somewhat familiar with what the object being represented looks like, a model may be desired that is a representation of the object's existing structure showing the arrangement of its parts---a "copy" of a culture or a cultural system. Weinberg's model (1973: 250) of the relationship of Southern Kwakiutl social organization to environmental and subsistence factors is of this type.

The model used in the discussion of Southern Kwakiutl medicine has a different function than Weinberg's model. Here we are confronted with a mass of ethnographic information, but the arrangement of the parts has yet to be discovered. Since we can not know what the arrangement of the parts is in advance, what is called for is an abstract model of cultural systems into which information and findings can be inserted so that they may be organized and analyzed. Only when this has been done will the arrangement of the parts unique to Southern Kwakiutl medicine begin to be seen.

As a general principle, the model should be an accurate representation of the general structure of cultural systems while being of sufficient simplicity so as not to distort the data it treats. What is required, then, is a simple model that can be both a basis for gathering and dividing data on

medicine in Southern Kwakiutl culture into readily analysable units or categories and a basis for forming some understanding of the interrelationships between these units or categories.

### 2.1 White's Model of Culture

The basic model used here is based on a model suggested by Leslie White. White first proposed the model as part of the attempt to explain the general evolution of culture. He argued that culture is a system consisting of three inter-related components: technological, sociological, and philosophical. White outlined the composition of each of the components:

The technological system is composed of the material, mechanical, physical, and chemical instruments, together with the techniques of their use, by means of which man, as an animal species, is articulated with his natural habitat. Here we find the tools of production, the means of subsistence, the materials of shelter, the instruments of offense and defense. The sociological system is made up of interpersonal relations expressed in patterns of behavior, collective as well as individual. In this category we find social, kinship, economic, ethical, political, military, ecclesiastical, occupational and professional, recreational, etc., systems. The ideological system is composed of ideas, beliefs, knowledge, expressed in articulate speech or other symbolic form. Mythologies and theologies, legend, literature, philosophy, science, folk wisdom and common sense knowledge, make up this category (1949: 364-365).

In White's view of culture, technology, the prime-mover, is the determinant of the sociological and philosophical components since technological change has been the impetus

for the general evolution of culture:

We may view a cultural system as a series of three horizontal strata: the technological layer on the bottom, the philosophical on the top, the sociological stratum in between. These positions express their respective roles in the culture process. The technological system is basic and primary. Social systems are functions of technologies; and philosophies express technological forces and reflect social systems. The technological factor is therefore the determinant of a cultural system as a whole. It determines the form of social systems, and technology and society together determine the content and orientation of philosophy. This is not to say, of course, that social systems do not condition the operation of technologies, or that social and technological systems are not affected by philosophies. They do and are. But to condition is one thing; to determine quite another (1949: 366).

If we were to visualize White's model of culture it would be quite simple in appearance (Fig. 2).

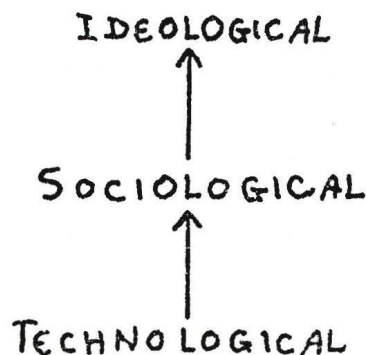


Fig. 2 White's model of culture.

Service has pointed out that White's deterministic approach to the general evolution of culture is useful if one keeps two provisos in mind:

(a) that the environment is held constant, which is to say that culture as a totality

is regarded as a closed system in order that only its own internal integration is under consideration; and (b) that the actual mechanics of evolutionary change are not being described(1968: 26).

## 2.2 The Adaptation of White's Model

White's model is useful if it is viewed as a provisional model which may be refined to meet the needs of the study at hand. His model will be altered here from a general model of culture to one in which a specific culture may be viewed as an open system.

As a beginning, a change in vocabulary will be made. When technology is dealt with in this study, the interest is not simply in material objects but in techniques as well. Consequently the term "technology and techniques" will be used. The terms "social organization" and "ideology" will be used, rather than "sociology" and "philosophy", to convey more precisely the aspects of culture under consideration.

The first step in altering White's model is to move away from the vertical hierarchy with technology, the prime-mover, determining the social stratum and, together with the social stratum, influencing the philosophical or ideological stratum. In its place a model in which technology and techniques, the social organization, and ideology interact and mutually exert influence on one another will be used (Fig. 3).

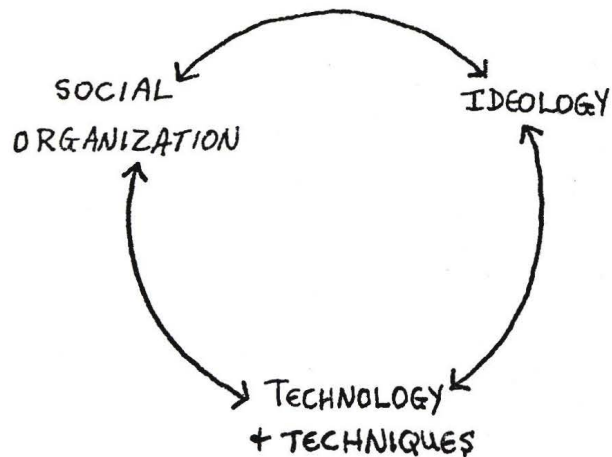


Fig. 3 Model of culture.

Although technology is no longer seen as the prime-mover, it remains the basic and most immediate point of articulation of a culture with its physical environment.

In defining the composition of the technological, sociological, and ideological components of culture, White hinted at, but did not make explicit, the point that major systems within culture---religious, economic, and political systems, for instance---each have an attendant set of technology and techniques, social organization, and ideology. In analyzing the ethnographic data it is useful to regard these systems as segments or "slices" of the total culture (Fig. 4).

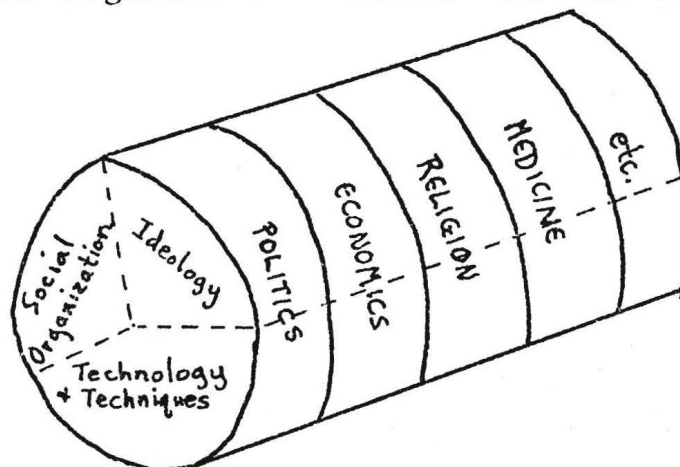


Fig. 4 Systems as segments of culture.

Since none of these systems is closed, the model must handle the fact that the technology and techniques, social organization, and ideology of each system interact with the technology and techniques, social organization, and ideology of other systems (Fig. 5).

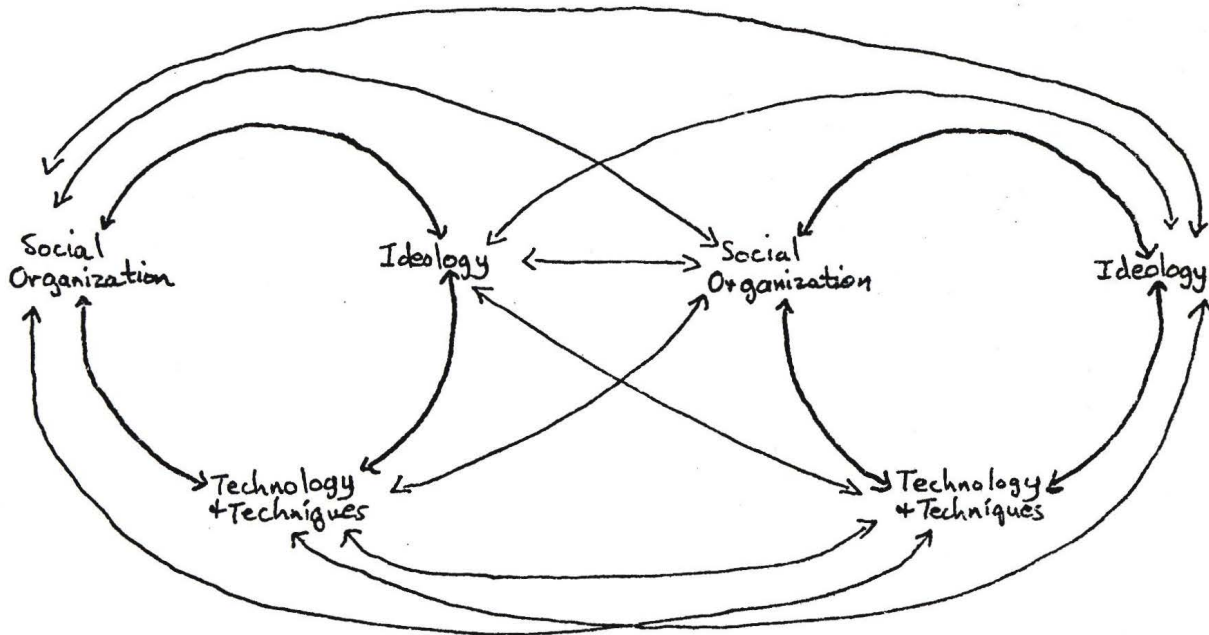


Fig. 5 Model of systems in interaction.

This leads to a model where change can be illustrated. As may be seen in the Conclusion, a change in one part of the total cultural system can be traced as it exerts its influence elsewhere in the system.

It must be stressed again that this is an analytical model. It is not intended to serve as an exact copy of a culture, but to allow a culture to be pulled apart into smaller, more easily handled units and to trace the inter-relationships of the units.

Although technology and techniques, social organization, and ideology will be discussed in the abstract in this

discussion, in reality in a culture they are manifested in day-to-day human behaviour. It is from behaviour--both individual and social--that the underlying forms and patterns of technology and techniques, social organization, and ideology are sifted out.

So far in the discussion of models, medicine has been spoken of as a system. From the point of view of the reconstruction of the Southern Kwakiutl medical system, a principle difficulty is the scarcity of information about some aspects of medicine or the culture. This paucity of data makes it difficult to actually demonstrate that medicine in fact formed a unified, integrated system. Consequently, although medicine probably formed a system, we are compelled to speak of it as an area, sphere, or field of thought and action in the culture rather than as a tightly-knit system.

While lack of data is sometimes a problem, the wealth of information on some topics permits, if not a total reconstruction of Southern Kwakiutl medicine, at least a promising beginning.

### 2.3 Form and Content of the Medical Sphere

It may assist us if we view medicine as "a patterned set of ideas and practices having to do with illness" (Glick 1967: 32). We may regard illness as involving abnormal physical, emotional, or mental states, provided that we remember that what is regarded as abnormal is socially defined and may vary from culture to culture just as the

ideas and practices may vary. Illness may perhaps be best understood in terms of a literal understanding of the word "disease" or "dis-ease". That is to say, the patient, or those around him, are aware that he is physically, mentally, or emotionally not "at ease," that something is wrong, that things are not normal, that somehow things are not as they should be with him. Clustering around the notion of abnormal physical, mental, or emotional states in a culture is a set of ideas and practices "regarding the causes of illness and the ways in which illness is handled or prevented" (Seijas 1973: 544).

Southern Kwakiutl medicine will be split into parts or categories. The first part involves preventive medicine, those practices which aim at the prevention of illness. Analgesics which ease or control pain when the patient is in an abnormal state, as well as surgery, a technique used to treat abnormal physical conditions, will be considered separately. Burns and injuries, which create abnormal states in the body, will be treated as a category. Illnesses, in the strictest sense of the word, will be divided into ailments, those illnesses treated with remedies and having causes that are not considered of sufficient significance to require "co-operative responses from the sick individual's social group" (Glick 1967: 35), and significant illnesses, those having significant causes requiring a co-operative response.

The technology and techniques, the social organization,

and the ideology associated with medicine will be examined in turn. In the area of technology and techniques attention will be paid to, in White's words, "material, mechanical, physical, and chemical instruments" (1949: 364) and to the techniques employed in using them. The concern is not only with concrete objects but also with the methods used to treat illnesses. The area of social organization will be concerned with interpersonal and social relationships and, particularly, with the roles of patient and curer. The area of ideology will be concerned with reconstructing the people's ideas and philosophy about illnesses, their causes and treatment, and the human body. Attention will also be paid to symbols, concepts of supernatural power, and ideas about the sacred and secular spheres of life.

### 3. SOUTHERN KWAKIUTL MEDICINE

In the following section what is known from the ethnographic data of Southern Kwakiutl medicine will be reconstructed.

#### 3.1 Technology and Techniques

##### 3.1.1 Preventive Medicine

Preventive medicine involves practices associated with the prevention of illness. Preventive measures may be linked to particular stages in the life cycle.

Birth.--Many of the preventive measures taken at the time of birth focus on the handling of the navel string and the afterbirth to insure the child's good health and character.

For four days, the afterbirth is kept wrapped up in the house. On the fifth day, early in the morning, a smooth, sharp twig of yew wood, about four inches long, is inserted in the end of the navel string, which is tied around it with sinew from the neck of the deer. Then grease is smeared over it, and it is strewn with ashes. This has the effect of making the navel cord dry up quickly and the child have a smooth navel. On the fifth morning, four layers of cedar bark are wrapped around the afterbirth. Then, while it is still early in the morning, it is buried at a place where people will walk over it. This insures the health of the child. That of boys is, in most cases, buried in front of the house door. That of girls is buried at high-water mark. It is believed that this will make them expert clam diggers. The afterbirth of boys is sometimes exposed at places where ravens will eat it. Then the boys will be able to see the future. If the mother does not wish to have any more children, it is buried at high-water mark or at low-water mark.

On the day when the afterbirth is buried, the septum of the nose of both

boys and girls is perforated. It is believed that this keeps away sickness and ghosts. Four days after this, the lobes of the ears are perforated (Boas 1966: 362).

Following the birth of a child, a number of measures--- many involving the application of parts of plants or animals to the child's body--- may be undertaken (Boas 1966: 362-365) in an attempt to insure that the child will be strong, healthy, good-looking, wealthy, skilled, and of good character in later life. These techniques are called *pe'spatq!ala*<sup>1</sup> (Boas 1966: 363).

Early Infancy.--Preventive measures are undertaken after the birth which focus on strengthening the child or on warding off potential illnesses. For example, the perforation of the ear lobes and the septum of the nose are thought to keep away illness. The ashes of the bark of the wild cherry (*Prunus emarginata*) may be spread on the child's chest to protect it against rashes and mouth sores (Turner and Bell 1973: 290). Hair tonics made from mashed skunk cabbage root (*Lysichitum americanum*) (Turner and Bell 1973: 271), dry kelp leaves (*Nereocystis luetkeana*) (Turner and Bell 1973: 261), or bulrushes (*Scirpus americanus*) (Turner and Bell 1973: 272) might be applied to a child's scalp to encourage the growth of hair. Chewed salmonberry sprouts (*Rubus spectabilis*) could be applied to a child's head to encourage the child to grow in height as quickly as the shoots (Turner and Bell 1973: 291).

Childhood through Adulthood.--Preventive measures in this

category involve technology and techniques used on a regular basis by individuals in the ordinary course of their life.

Very little exists in the way of technology that is directed solely at the prevention of illnesses in day-to-day living. Plants or parts of plants and animals used to prevent illness are usually more specifically used as remedies to treat illnesses.

Nevertheless, although ordinary preventive medicine lacks unique instruments of technology, a number of techniques were used to prevent illnesses. Since an exhaustive list of these would comprise a study in itself, only a few examples are given here. The specific techniques are perhaps less important in themselves than in what they suggest about how the Southern Kwakiutl view illness.

Techniques of preventive medicine can be organized on the basis of two sets of key distinctions. The first distinction that may be made is that between negatively directed techniques, those thought to forestall illness, and positively directed techniques, those thought to build up or reinforce health. In the sphere of ordinary preventive medicine a number of negatively directed techniques involved the great care that was taken to dispose of urine, feces, blood (especially menstrual blood), sweat, saliva, hair and nail clippings, old clothing, and the corpses of the dead lest these materials be used by others in sorcery practices to cause illness. Charms made of plant material could be worn around the neck to ward off disease (Boas 1966: 379).

Among positively directed techniques were the use of some medicines usually used as remedies for ailments which could be taken on a more regular basis to maintain good health. An important positively directed technique was the stress placed on physical cleanliness as a means of keeping an individual ritually pure and less ready to succumb to illness.

The second set of distinctions may be made between prescribed behaviour, those activities an individual should undertake to maintain good health, and proscribed behaviour, those activities an individual should avoid if good health is to be preserved. An example of prescribed behaviour is the precautions taken against the attack of ghosts when an individual has dreamed of them and might be vulnerable to attack (Boas 1966: 377-378). An example of proscribed behaviour may be drawn from the realm of the relationship of man and the natural world. The bark of the Western Red Cedar was never taken off all the way around the trunk in the belief that to peel it that way would cause the tree to die and a nearby tree would curse the one who had committed the offence causing the offender to die in turn (Boas 1921: 616-617). The bark-gatherer, as he stripped the bark in the correct fashion, prayed in the prescribed manner to the spirit of the tree to "Keep sickness away from me" (Boas 1921: 619).

Girls' Puberty Rite.--The time when a female reaches puberty is one when an array of materials and techniques are used

for preventive medicine. Boas's lengthy account of the practices surrounding a girl's puberty is presented here to document the materials and techniques used during the rite:

When a girl reaches maturity, she must stay in the house for four days. During this period, there are no severe restrictions. She may sit near the fire, and she is allowed to eat as much as she desires, although generally she feels depressed and has not much appetite. She does not eat fresh fish, shell fish, berries and roots, only those of the previous season. The menstrual fluid is caught in a diaper of shredded cedar bark.

After four days have elapsed, the period of purification begins. She is placed in charge of an elderly woman, a relative, but not her mother, who performs all the prescribed rites. On the morning of the fifth day, before the ravens rise, and again on the morning of the ninth, before the ravens rise, and again on the morning of the ninth, thirteenth, and seventeenth days, she is washed by this woman. These washings are repeated four times more at intervals of eight days; that is, on the morning of the twenty-fifth, thirty-third, forty-first, and forty-ninth day. On the evening before the washing, the old woman gathers four smooth diorite (tsquls?) pebbles. The next morning she puts them into the fire. When they are hot, she takes them up with a pair of tongs, making the motion of taking the stones three times, but really lifting them the fourth time. Then she puts them in the same manner into a box containing water. Care must be taken that this water does not come from a place where nettles grow, otherwise the girl's body would itch in after life. The stones are heated carefully, for if one of them should crack, it would portend a short life for the girl. On the other hand, if they remain whole, she will live to be very old. During this time, the girl sits facing the east. When the water is warm, the woman sprinkles it on her head four times, praying (ts!E'lwaga) that she may grow up to be healthy, strong,

industrious, wealthy, and that she may have a good husband. Then the girl is wiped with undyed, shredded cedar bark. A loose ring, about seventy centimeters in diameter, of undyed shredded cedar bark is made, and the woman, after drying the girl, takes up the ring, holds it over her head and turns to the left once. The girl turns in the same direction at the same time. This is repeated three times. The fourth time, she puts it over her head and wipes her body with the ring down to her feet; the girl steps out of the ring, the right foot first, and then turns four times to the left. The old woman also turns.

Then the girl is placed in a small room (ē'xEndats!ē) which is put up for this purpose in the right-hand rear corner of the house (that is, to the right when looking from the door to the rear of the house). Then she sits down on a mat, leaning against a backboard, facing the door of the house. She wears four strings of mountain goat wool around each wrist, four under the knees, four around the ankles. She has a hat on her head, which protects her eyes against light, otherwise she would become blind in later life, or at least, she would have red eyes. Four tassels of mountain goat wool are sewed to the top of her hat. She wears a belt of cedar bark, so that she may have a slender waist. She also wears an apron of cedar bark. A wide belt of mountain goat wool, furnished with holes for the nipples, is worn on the breasts; this is to prevent her breasts from being too full. Her two braids fall down in front of her shoulders. There are four tassels of wool at the end of each. She has a scratcher of copper to scratch her head. If she should touch her hair with her fingers, the skin would always be rough. She drinks water through the wing bone of an eagle (nā'gayn), so that she may not take too much at one mouthful. Otherwise she would have a stout belly. She always rubs her face and her waist with catfish oil scented with gē'stēm (*Heracleum lanatum*), and afterwards wipes herself with soft cedar bark. They must keep tallow in the mouth all the time, so as not to be thirsty. She must always look down in front of herself. There is no fire in her room. She is not allowed

to lie down in the day-time, while at night she may go to bed. Her face, the parting of her hair, and her hat must not be painted, otherwise her skin would become red. She wipes her face with undyed, shredded cedar bark to make it white. Only her mother is allowed to enter her room. She brings her meals to her. She must not eat anything fresh---neither fish, nor shell fish, nor berries and roots. She is given only cold dried salmon, halibut, and clams boiled in water. If she should eat warm food or fresh huckleberries, she would have bad teeth. Fresh food always causes internal diseases. If she should eat fresh salmon, the salmon would no longer go up the river. She must take only four pieces of food and four mouthfuls of cold water at each meal. Her meals are at the time of low tide. If she should eat at high tide, or if she should eat too much, she would be greedy for food all her life. She speaks but very little, and slowly, and must not laugh, otherwise she would become talkative and a laugher. Hemlock and ferns are put under her bed, that she may have many children---as many as the hemlock and fern have leaves. If she does not want to have children, copper is placed under her bed. She must rise every morning before the ravens cry. She leaves the room only to ease herself. Then she must not go near the fire, and she must walk very slowly. She must put her right foot out first and look straight ahead. She wears her hat, so that she may not see the sun. She does not need to turn before passing through the doorway. She must not speak to any man. Children are sometimes sent into her room, and she will bite or pull their hair, in order to make the children grow quickly. She licks their eyes in order to make them keen eyed. For four months, she must not go near the sea, otherwise she would have boils on her legs. For the same period, she must not go near the river, otherwise the salmon would cease running.

After the last washing, the woman who attended her is paid. She receives the old clothes and the hat of the girl.

The tongs, stones, cedar bark, the ring, and the ornaments of wool, also all

her clothes, so far as they are soiled by menstrual fluid, are gathered and tied together, to be deposited in a dry place under stones. Most of the tribes deposit this material in a cave called Hiding-Place (q!wě'q!wala<sub>as</sub> ) (q!wā'lastshida ) in Knight Inlet. The material is kept until an opportunity is offered to visit this place. At the close of the period of purification, the hair over her forehead is cut to a length of from ten to twenty centimeters. Almost ten centimeters are cut off from her back hair. The eyebrows of the girl are trimmed with tweezers. All the hair under the upper rim of the orbits is pulled out, and the upper line is also made sharp by pulling out the scattering hair on the forehead near the eyebrows. Her fingernails are cut at this time. She is given new clothing, and the parting of her hair is painted with ochre (1966: 368-370).

Following the puberty rite, the father gives a potlatch and the girl receives a name from her mother's family that came to her father as part of the mother's dowry at marriage (Boas 1966: 370).

The important technological items of the purification ring and the seclusion room will be discussed further when the material on soul loss and intrusive object illnesses is presented.

In terms of techniques, the puberty rite itself appears to consist of the divination procedure with the hot stones to determine the girl's life span and to try to insure her future welfare, purification procedures with ritual washing and a purification ring perhaps to counteract the contaminating influence of the menstrual blood, and a period of seclusion. Those preventive medical procedures concerning positively and negatively directed techniques and prescribed

and proscribed items of diet and activities for which the purpose was recorded appear to be primarily involved with trying to guarantee that the girl has good health, good looks, and is of good character in later life.

Pregnancy and Childbirth.--Pregnancy and birth involve an array of materials and a number of techniques for safeguarding the health of the mother and child.

According to Boas there are special foods that a woman may eat or special actions that may be undertaken that are thought to increase the likelihood of conception (1966: 358). For example, the gum of the Western White Pine (Pinus monticola) may be chewed to aid fertility (Turner and Bell 1973: 270). The first signs of pregnancy in a woman are decreased energy and a decrease in appetite. From the time that a woman ascertains that she is pregnant, she and her husband undertake measures that fall under the heading of preventive medicine (Boas 1966: 358-361). The measures focus on trying to insure that the mother experiences an easy delivery and that the child will be healthy. Negatively directed techniques may involve such things as the mother avoiding looking at anything "ugly, deformed, or sick" (Boas 1966: 359) lest the sight should affect the form or health of the child at birth. Positively directed techniques are frequently used to try to insure an easy delivery. For instance, the mother will take off her bracelets, loosen her braids, and drink various concoctions in the belief that this will aid in an easy birth (Boas 1966:

360-361).

Among the prescribed activities is the requirement that the woman take special care that she is ritually pure during pregnancy (Boas 1966: 360). She should pray to the tips of four hemlock trees and wash with hemlock daily (Turner and Bell 1973: 271). Proscribed behaviour frequently involves foods that must not be eaten (Boas 1966: 359), since they might have an adverse influence on the ease of delivery or the child's health, and actions and situations that should be avoided to prevent a breech presentation of the infant, the twisting of the umbilical cord around its neck at birth, or poor health in the child (Boas 1966: 358-361).

Boas has given a detailed account of the technique used for delivering an infant and the techniques for handling the umbilical cord following the birth:

When the time of delivery approaches, the woman is either taken outside, or all the other inhabitants leave the house. If a sick person is in the house, she must go out, because a single drop of blood left in the house would make the condition of the patient worse. During the whole period of labor, her husband must walk from house to house, entering slowly through the rear door, and going out quickly through the front door. Everybody must keep quiet, that the child may not be afraid to come. One or two professional midwives (*ma'mayutse'aēnox*) stay with the woman. They dig a pit, and one of them sits down on the edge, stretching her legs across so that her feet and the calves of her legs rest on the opposite edge of the pit. The woman who is about to be confined sits down in her lap, straddling her legs so that both

her own legs hang down in the pit. The two women clasp each other's arms tightly. The third woman squats behind the one who is about to be confined, pressing her knees against her back and embracing her closely, so that her right arm passes over the right shoulder of her friend. If there is only one midwife, she sits on the pit in the same position, but she holds the mother around the waist, while the latter embraces her neck and leans her head on her shoulder. Then the midwife blows down the mother's neck in order to produce a quick and easy delivery. The pit is lined with soft, undyed cedar bark (*k·ā'dzEk*). The child is allowed to drop into the pit, and is left there until after the afterbirth has been expelled. The child, when taken out of the pit, is taken on the right arm, otherwise it would be left-handed. As soon as the afterbirth has been expelled, the mother is put to bed. The navel string is tied at two places with sinew from the neck of a deer. It is placed across a wedge and cut between the ligatures with shells of the mussel or *xamsmekin*. Recently, iron knives and scissors have been used for this purpose. If the navel string is cut with a copper knife, the woman will have no more children. The same effect is produced if the mother bites the navel string four times before it is cut (1966: 361-362).

If the baby should be overdue, labour may be induced if the woman drinks the juice of the roots of stinging nettles (*Urtica dioica*) (Turner and Bell 1973: 293).

The root of the wild cherry (*Prunus emarginata*) could be applied to a woman's breasts to encourage the infant to nurse (Turner and Bell 1973: 290). Poultices made of black twinberry (*Lonicera involucrata*) and sea lettuce (*Ulva lactuca*) or yarrow (*Achillea millefolium*) could be applied when a woman's breasts hardened after bearing a child (Turner and Bell 1973: 262,278).

Death and the Dead.--Preventive measures at the time of a person's death concentrate on the disposal of the corpse, which is regarded as unclean (Boas 1966: 378), so that the living will not be harmed. The body is buried or placed in a box almost immediately after death (Boas 1935: 35).

Although no actual cases of illness caused by ghosts could be found in the ethnographic data, measures taken to prevent such illnesses are undertaken. The sight of ghosts could cause cramps and dizziness or loss of consciousness it was thought. Ghosts could also take away the life of a person. Preventive measures may involve burning food and clothing for the dead to use (Boas 1966: 165) or ritual bathing as a safeguard against attack (Boas 1966: 378). If an individual dreams of ghosts he may be vulnerable to attack. To safeguard him he may be placed in a seclusion hut or room (Boas 1966: 377-378).

Having noted that preventive measures are taken during the life crises of birth, death, and pregnancy, childbirth, and puberty for females, the question arises of whether or not measures are taken at other points in the life cycle as well. An extensive search through material on marriage, the potlatch, and initiations revealed a negligible quantity of data on preventive medical practices. It may be that preventive measures are found at the points in the life cycle when biological functions are the basis for a change in role or status but are not found at points when biological functions are of far less importance than considerations

of politics, economics, increased prestige, wealth or influence, and other social factors.

### 3.1.2 Analgesics

The Southern Kwakiutl applied the chewed seeds of Lomatium nudicaule to treat headaches, aches, pains, and soreness (Turner and Bell 1973: 276-277). Headache could also be treated by striking the sufferer with four spruce branches until his head bled (Turner and Bell 1973: 269) or by cauterizing the temples, nape of the neck, and crown of the head (Boas 1966: 386). In cures for illnesses caused by intrusive objects, the shaman may bite the patient's skin on the sore area to dull the pain caused by the object (Boas 1966: 142). Poulticing appears to have been practiced partly for its counter-irritant effect. If a child cut himself, the father might make a cut in his own body and apply some of his blood to the child's wound in the belief that this would remove the pain (Boas 1966: 384).

### 3.1.3 Surgery

Some surgical procedures were carried out by the Southern Kwakiutl. Fingers may be amputated (Boas 1966: 384). Tumours may be cut open and drained or cut out (Boas 1966: 383). When a tumour is cut out, the incision is filled with pulverized shell and sandstone mixed with fish oil to dry it up. Then a mixture of the woolly pappus of the fireweed seed (Epilobium angustifolium), eagle down, and fish oil is applied to the cut (Boas 1966: 383; Turner and Bell 1973: 287).

The instrument used for performing surgical incisions is a human skeleton bone (Boas 1966: 384, 387).

Cauterization may be used to halt bleeding (Boas 1966: 384) or to remove warts or moles (Boas 1966: 386).

#### 3.1.4 Burns and Injuries

Severe burns are treated by the application of seal blubber or skate's liver (Boas 1966: 383). Chewed hemlock needles (Boas 1966: 383) or the powdered bark of salmonberry (Rubus spectabilis) (Turner and Bell 1973: 291) could also be applied to a burn.

Bleeding from injuries could be controlled through the technique of cauterizing the wound, by using a tourniquet (Boas 1966: 384), by applying powdered thimbleberry (Rubus parviflorus) leaves to a wound to aid clotting (Turner and Bell 1973: 291), or by the use of dressings made from plant fiber and pitch, spider's webs (Boas 1966: 384), squid skin, or the bodies of snails.

Swellings, cuts, and sores were treated by bathing the area with special solutions or applying poultices and unguents. Many plants found in the Southern Kwakiutl pharmacopoeia are used for these purposes.

Splinters and thorns may be drawn out by the use of poultices made from heated skunk cabbage leaves (Lysichitum americanum) or the roots of water hemlock (Cicuta douglasii) (Turner and Bell 1973: 271, 276).

No information was found on the treatment of broken bones.

### 3.1.5 Ailments

Ailments are illnesses that are not considered to have causes of sufficient significance to require a co-operative response from the patient's social group. Ailments require "no treatment other than what might be called remedies" (Glick 1967: 35).

The technology and techniques used for treating ailments are quite extensive for the Southern Kwakiutl. Most remedies involve the use of plant or animal materials. A list of the materials, the techniques of preparation, and the means by which they are administered has been presented in Appendix A. It is doubtful that the list is in any way exhaustive, but it serves to illustrate the wide range of remedies used.

In the discussion of ailments, the general type of treatment will be mentioned and the materials used in remedies listed. For a more detailed description of particular treatments, Appendix A may be consulted.

It will be seen that some of the ailments are illnesses probably introduced on the Northwest Coast by the European population. The period in which much of the information on medicine was collected was one in which the Southern Kwakiutl population was declining, largely due to deaths from disease and a lowered birth rate. The effect of disease on population is discussed in Appendix B.

It is not clear how the Southern Kwakiutl themselves classified ailments. Although ailments probably could be

grouped in other ways, for our purposes they can be most easily and simply organized on the basis of the parts of the body they afflict.

Ailments of the Respiratory System and Throat.---Under this classification falls pulmonary tuberculosis, pneumonia, bronchitis, whooping cough, colds, and sore throats.

Respiratory difficulties and coughing were treated with extracts made from plants such as Abies grandis, Alnus rubra, Aralia nudicaulis, Oplopanax horridum, Prunus emarginata or from bear's bile. Relief could sometimes be found by sucking the roots or seeds of plants such as Aruncus sylvestris or Lomatium nudicaule.

The spitting or vomiting of blood, a probable symptom of pulmonary tuberculosis, could be treated with such plant and animal materials as Alnus rubra, Aralia nudicaulis, Kalmia polifolia, Menyanthes trifoliata, Polypodium glycyrrhiza, Pyrus fusca, Rubus parviflorus, Rubus spectabilis, bear's bile or sea cucumber (Holothuria). The materials were either sucked or made into extracts and concoctions and taken internally.

Colds could be treated with poultices made of Achillea millefolium or Ulva lactuca, extracts made from Picea sitchensis buds, or by snuffing powdered hellebore leaves (Veratrum viride).

Pains in the chest could be treated by rubbing the skin raw and applying hellebore roots (Veratrum viride) or by applying the hot leaves of Nuphar polysepalum to the chest.

A sore throat caused by tonsillitis or diphtheria could be treated by holding four snails encased in moss in the throat.

Internal Ailments.--Nausea, stomach ache, and stomach pains were treated with extracts made from such materials as Menyanthes trifoliata, Pinus contorta, Rhamnus purshiana, or bear's bile. Rumex occidentalis could be used as a poultice for a stomach ache. Parts of plants such as Menziesia ferruginea, Oplopanax horridum, or Pinus monticola could be chewed, sucked, or eaten for stomach troubles. Emetics, purgatives, and laxatives were made from such materials as Abies grandis, Cicuta douglasii, Lomatium nudicaule, Oenanthe sarmentosa, Oplopanax horridum, Osmorhiza chilensis, Physocarpus capitatus, Porphyra spp., Rhamnus purshiana, Sambucus racemosa, and Veratrum viride. Diarrhoea could be treated by sucking parts of certain plants or by taking concoctions. The materials used were from plants such as Blechnum spicant, Juniperus communis, Picea sitchensis, Polypodium glycyrrhiza, Pseudotsuga menziesii, Ribes lobii, Rubus ursinus, and Tsuga heterophylla.

A swollen kidney was treated with poultices of yellow cedar leaves (Chamaecyparis nootkatensis) or spruce bark (Picea sitchensis).

Pains in the area of the heart were treated by chewing the leaves of Menziesia ferruginea or by taking an extract of Prunus emarginata bark.

Fever.--To treat fever, the body is wiped with cool moss.

Eye Ailments.--Eyewashes made from grasses, Potentilla pacifica, Symphoricarpos albus, or sea worm's shell were used to treat cataracts and eye inflammations. Ointments made from Tsuga heterophylla, powdered snails in fish oil, or the sediment from a urine box could be applied to treat inflammations or counteract blindness. Sties could be treated by snapping cedar twigs (Thuja plicata) in front of the eyes to encourage the sties to go away.

Ear Ailments.--Fish oil may be put in the ear to treat deafness or buzzing (Boas 1966: 385). Deafness may also be treated by steaming the ear with urine before careful cleaning.

Swellings in the ear could be treated by rubbing sediment from a urine box near the ear.

Mouth Ailments.--Gum boils, cankers, and sores in the mouth may be treated by sucking parts of such plants as Abies grandis, Cirsium spp., Conocephalum conicum, and Prunus emarginata.

Physically Disabling Ailments.-- Rheumatism and locomotor ataxia fall into the category of physically disabling ailments. Rheumatism may be treated with sweat baths, foot baths, or bear's gall. Locomotor ataxia, the inability to control voluntary movements, is treated by bathing in urine or with sea wrack (Fucus gardneri), sweat baths, purgatives such as an extract of Physocarpus capitatus roots, by cutting the flesh, or by rubbing such materials as powdered maggots and fish oil (Boas 1966: 387), Urtica dioica, Veratrum

viride roots, or crushed human skeleton bones on the body. Although attributed by the Southern Kwakiutl to "bad blood" or standing in the sea during oulachen fishing season (Boas 1966: 387), locomotor ataxia may be a symptom of the tertiary stage of syphilis.

Skin Ailments.--To bring out a measles rash, such materials as herring spawn, ochre, the mouth parts of small barnacles, and skate's liver are used. Eczema is treated by wiping the area with cloths and placing the cloths in a crack in a wild crabapple tree (Pyrus fusca) or by taking an extract of Prunus emarginata bark. Carbuncles were treated with poultices made from Lomatium nudicaule, Lysichitum americanum, Pseudotsuga menziesii, Ribes lobbii, and Thuja plicata. Corns, warts, and bunions may be removed with Drosera rotundifolia. Loss of pigment was treated by rubbing the body with kelp leaves (Nereocystis luetkeana).

Swellings and Sores.--Sores, swellings, and sore areas were treated with poultices or bathed with mixtures made from a wide variety of plant materials. Crushed Moneses uniflora could be applied to painful swellings to cause the skin to blister and peel as an aid to healing.

It is not clear from the information if the sores involved smallpox sores as well as ordinary sores, although it seems likely smallpox sores would be treated in this way.

The materials used for treatments were Achillea millefolium, Allium cernuum, Alnus rubra, Anaphalis margaritacea, Chamaecyparis nootkatensis, Crataegus

douglasii, Fucus gardneri, Fuligo, Lonicera involucreta,  
Lysichitum americanum, Menziesia ferruginea, Nicotiana sp.,  
Nuphar polysepalum, Oplopanax horridum, Osmaronia  
cerasiformis, Picea sitchensis, Plantago major, Potentilla  
pacifica, Ribes lobbii, Rubus spectabilis, Rumex  
occidentalis, Tsuga heterophylla, and urine.

It may seem strange to us that the Southern Kwakiutl would treat potentially fatal or highly debilitating diseases such as tuberculosis, smallpox, or syphilis on the level of ailments. Yet it appears that the causes of these illnesses were not ascribed particular significance and no response by the patient's whole social group was called for, although a particular relative might administer a remedy.

Smallpox, tuberculosis, measles, influenza, pneumonia, whooping cough, bronchitis, and venereal diseases were extremely common among the people in the 1800's and early 1900's and were important factors in the sharp decline of population (Codere 1950: 49-61). It is not unlikely that the Southern Kwakiutl understood either from experience or information given to them by whites what they faced with these illnesses. The diseases themselves were difficult to treat successfully. The approach taken was likely the pragmatic one of letting them run their course but of seeking to make the patient comfortable by controlling the symptoms through the use of remedies.

### 3.1.6 Significant Illnesses

Significant illnesses involve that area of medicine

which is concerned with illnesses "having significant causes and demanding co-operative responses from the sick individual's social group" (Glick 1967: 35). Significant illnesses among the Southern Kwakiutl may be classified on the basis of three major perceived causes: (1) those illnesses caused by an intrusive object in the patient's body, (2) those caused by "soul loss", and (3) those caused by contagious magic used in sorcery.

Intrusive Object Illnesses.--It appears that the technology and techniques used to diagnose and treat intrusive object illnesses may vary in detail from one shaman-curer to another, but that they show basic general similarities.

The techniques for curing involve the removal by manipulation, often by sucking, of a tangible disease object that has entered the body. The object itself may take several forms. The Nakwotak shamans of Seymour Inlet state that the objects are crab's toes or a bit of slate or bone sometimes wrapped with eagle down. The Koskimo state them to be hemlock leaves or flies. The Nimkish, Maltipi, Mamalillikula, and Tlawitsis describe them as "green matter" (Boas 1966: 141; 1930: 36).

The technique for diagnosing the presence of the disease object and the likely course the disease will take involves putting pressure on the affected area:

First the shaman presses hard with one finger on the painful place. If, after the removal of the pressure, the spot remains white, the prognosis is bad; if it turns red quickly it is favorable; when it turns

red slowly, the patient will recover. After sucking, he watches the place. If it turns blue, the prognosis is good; if red it indicates a long sickness. If it does not show any discoloration, it shows that the patient will die (Boas 1966: 141-142).

Some variation appears in accounts of the actual performances of cures by different shamans. Nevertheless, the underlying techniques appear to be the same.

The sick person is brought from the isolation hut, a shed made of hemlock or spruce twigs in the woods or an area set aside in the house, and brought into the open area in the house where he or she lies down on a new mat.

The shaman follows his own particular preparations for calling on his supernatural sponsor to invoke his power, which may involve singing his sacred song, the use of a rattle, dancing, or crying out while time is beaten on a plank. The power invocation may have a marked effect on the shaman:

Many shamans while performing tremble violently with the whole body, particularly with jaws and stomach. The trembling is produced by bending the right knee down to about five centimeters from the ground, the left knee being straight up, the body stiffly held backward. Then he bends forward so that the stomach is near the ground between the spread knees. I have, however, seen shamans performing the jabbing of the jaw and the trembling of the stomach without preparation, presumably a result of long practice. I have been told by them that when performing in this way, "all the strength gathers in the stomach. He has the feeling as though knives were cutting his insides" (Boas 1966: 136).

Following the power invocation, the shaman sits down facing his patient. A dish filled with water or urine is placed at his right side. With his hands he locates the painful area on the patient's body. Wetting his mouth with the liquid in the dish, he commences to suck the skin of the painful area and sometimes to blow on his hands as they touch the painful place or to blow directly on the affected area. Frequently the sucking is done four times and the skin over the painful place may be bitten, causing an effusion of blood and a soreness, which serves to dull the pain caused by the sickness (Boas 1966: 142). By sucking the shaman draws the disease object out of the body. He produces the object from his mouth, sometimes accompanied by the profuse vomiting from the pit of the stomach of blood or by blood streaming from his mouth where the shaman has bitten the insides of his cheeks. The disease object is carefully washed in the dish. The object is disposed of by the shaman throwing it into the air or throwing it into his own body where it is killed. The liquid in the dish is carefully disposed of.

An alternative to the sucking cure is the "pressing" cure associated with the Nimkish, Maltipi, Mamalillikula, and Tlawitsis. In cases of illness caused by "green matter" which has accumulated in the body, the technique involves attempting to force the matter out. Oil is rubbed on the patient's stomach and considerable pressure is then applied, pushing from "the end of the sternum down to the

symphysis [sic]" (Boas 1966: 142). Some of the matter passes out with the stool, while the rest is thought to come out in the patient's perspiration (Boas 1966: 142; 1930: 36).

Soul Loss Illnesses.--The technology and techniques used in cases of soul loss illnesses, as with cases of intrusive object illnesses, may vary in detail from one shaman to another but show basic general similarities.

The techniques for curing in cases of soul loss involve recovering the soul and returning it to the patient's body. The principal instrument used in the cure is the shaman's purification ring:

The most important ceremonial implement of the shaman is the purification ring (*qānā'yū*, from *qāx-a*, "to tie around"), which is also used in the purification of winter dancers. The essential feature of the use of the ring is that the patient must be passed through it. The ring is made of hemlock branches or of shredded, undyed cedar bark, large enough to be passed over the head and down the whole body of a patient. It has two short crosspieces in front, representing arms, and two long crosspieces behind, representing legs (Boas 1966: 136).

The ring is frequently covered with eagle down during the curing procedure.

Soul loss illnesses appeared to be diagnosed initially on the basis of the patient's reported symptoms:

When a person suddenly starts up, so that his breath is caught, he feels as though something was moving in his stomach, and the top of his head moves. This is the time when the soul jumps out of the body. A person to whom this has happened feels

like one dizzy: if he tries to think of anything, he cannot remember it (Boas 1966: 137).

The shaman confirms the diagnosis by feeling the back and sides of the patient's head to see if the soul is present or not.

A period of time, usually four days, is often prescribed for the patient to spend in an isolation hut before the shaman begins the curing ritual.

As was the case with illnesses caused by intrusive objects, variations occur in the accounts of the actual performances by different shamans of cures for soul loss. However, the underlying techniques appear to be the same.

Boas produced a standardized account of the curing ritual using a purification ring:

The shaman who is to bring back a lost soul prepares his purification ring of hemlock branches. When he approaches the house, carrying his ring, he sings the song, by means of which he calls his supernatural power. After it has arrived, he sings his second song, with which he calls the souls of the living, but the ghost souls also appear. He continues to sing until he sees the soul of the patient on the ring. Then he sings a third song, which praises the soul and encourages it to stay. As soon as he reaches the doorway, he sings his fourth song, the song of the ring (qa<sup>h</sup> nā' lā' yu ).

He walks towards the patient, holding the purification ring wide open. Four times he makes the ceremonial circuit of the house, turning as he enters, then in front of the fire, to the right of the fire, and in the rear, in front of the patient. With each turn the people beat time more loudly.

When he turns the second time, he may look through the ring at the people

sitting in the house. Those who are going to die within a short time are seen to look pale and sickly, and those who are sick have their hair hanging down over the face. When he reaches the rear of the house, he holds the ring close to the head of the patient, moves one step back and one forward, and raises the ring. Three times he repeats this movement; then he approaches the patient again and puts the ring over his head, down on the right side. Then he removes it again. In some cases another shaman sprinkles birds' down over the ring and on the head of the patient. The ring is turned from right to left and back, as though the body of the patient were rubbed with it. When removing the ring, he looks through it and sees many souls hanging from it. Before he finally puts the ring over the head of the patient, he shakes it violently, so as to shake off all the souls except that of the patient. During all this time, the shaman utters a deep "H?" (hēl'its!āla ), blowing upon the soul of the patient through the ring to cause it to stick to the ring, which is slowly rubbed down the patient's body. The shamans claim that the ring spreads when it is being put over the patient. When the ring reaches the down, the patient rises. Finally, it reaches the ground. Now the patient must turn in the ring and step out, first with the right foot, then with the left foot. He steps out towards the right of the shaman. Then the shaman himself turns, while the patient sits down again. The whole time the shaman must look at the soul. Every time the ring is put over the patient, the soul becomes smaller. Thus the soul enters the body of the patient, and "becomes blood" (E'l'x'sē'sta ).

After the patient has been passed through the hemlock ring four times, the down from the ring covers his body. The shaman puts the ring on a pole and walks around the fire four times while time is beaten. Then he folds the ring over, so that the head part touches the part representing the hips. The people smooth the logs on the top of the fire, and the ring is put down on the fire. This is

called "testing the life of the patient." Then the shaman continues to go around the fire, all the time looking at the ring. If it does not open, the patient will live for a long time. All the people watch the ring. The shaman goes around the fire four times, looking at the ring and singing his healing song (Boas 1966: 137-138).

An alternative method of enticing the soul back to the body involved the burning of food, clothing, and property. Souls that are detached from the body gather in an attempt to seize the goods. The shaman, able to "see" the souls, catches the soul of the patient in his hand, and returns it to the body of the patient by pressing it in his hands on the crown of the patient's head while blowing on his hands. The shaman may exhibit an object, purported to be the soul, to the spectators (Boas 1966: 139).

Sorcery-induced Illnesses. -- Sorcery among the Southern Kwakiutl is based on the use of contagious magic (Frazer 1911: I, 52) to produce illness or death in an enemy or for "love-magic" to win a recalcitrant lover. Contagious magic is based on the idea that whatever is done to an object will affect the individual with whom the object was once in contact.

The technology and techniques involved in sorcery focus on the use of bodily wastes or body parts of the victim. Urine, feces, blood (especially menstrual blood), sweat, breath, saliva, hair and nail clippings, and old clothing are all used. The basic technique of sorcery involves taking body parts or wastes, enclosing them in a receptacle,

sealing the receptacle, and heating it. The receptacle may be made of such materials as split human femurs, human skulls, split pieces of elder wood or pitchwood, the skin, flesh or sinews of a corpse, the sewn-up mouth of a toad, snake skin, or a bladder. The heating of the contents of the receptacle either over a fire or by placing it in the sunlight causes abdominal swellings (Boas 1966: 149) in the victim and, eventually, death.

There are several techniques used to cure illnesses caused by sorcery. In the case of the sorcerer using his art to win a recalcitrant lover, if the lover gives in he or she will live. If not, death is probable. Touching material used for sorcery with water in which a body was washed also counteracts the effects of sorcery. In other cases, finding the receptacle and carefully cleaning the contents or copying the sorcerer's methods and having a woman step four times over a duplicate of the receptacle will counteract the sorcery. If the receptacle cannot be found or duplicated, the victim may pray to the plants for aid. The victim may also rub himself with shredded cedar bark, divide the bark into four bundles, and bury them in front of four houses where the inhabitants must step over them as they come and go. The sorcerer will suffer the fate intended for his victim if the victim has been lucky enough to bury one of the bundles in front of the house the sorcerer happens to occupy. The effects of sorcery may also be broken if the victim has a woman who is menstruating or

who has just had intercourse step over his lower back as he lies prone on the ground.

Significant Illnesses in General.--Having considered each of the significant illnesses in turn, attention may be turned to the technology and techniques as a whole.

Associated with significant illnesses is a body of technology associated with the shaman-curer. Besides the disease objects, the eagle down, and the purification ring used by the shaman, he also has regalia that he wears and that distinguishes him from others. Although the dress is roughly similar, each shaman's appearance differed in detail (Curtis 1915: X, 91). Part of his attire is a red cedar bark neck ring, frequently with a small pouch attached in which he carries the disease objects and a quartz crystal representing his supernatural power (Boas 1966: 136). During the curing ritual he usually wears a dance apron and a head ring, wristlets, and anklets all made of red cedar bark and usually covered with eagle down. He may also carry a rattle, often made in the shape of a bird (Boas 1966: 136), which it is believed can be used to influence the movements of disease within the body. How this is done with a rattle is unstated in the ethnographic data. The shaman's face may be blackened with charcoal and he may wear a blanket held in place with a belt made of red cedar bark (Boas 1966: 143).

Frequently before a curing ritual is carried out, the patient has been in an isolation hut, generally for four

days. The word for an occupied seclusion hut is *hō<sup>é</sup>dzats!e* which Boas translates as "taboo receptacle" (1966: 170), indicating the idea that the sick person is not in a normal state.

The hut is a newly made shelter built of hemlock or spruce twigs and located in the woods. If it is impossible to take the patient into the woods, a frame made of four posts connected at the top by cross bars from which strips of red cedar bark and eagle down are hung is set up in the sleeping area of the house (Boas 1966: 133). The patient is washed and laid in the hut on a bed of hemlock or spruce twigs. The patient's mat, clothing, and bedcovers must all be new. Nothing old must be in the hut. Frequently the patient is covered with eagle down. If the patient can manage it, he or she must bathe each evening before dusk (Boas 1966: 378).

### 3.2 Social Organization

#### 3.2.1 Preventive Medicine

Birth.--The parents of the child are the ones who see that the preventive measures associated with birth are carried out with the help of the midwives.

Early Infancy.--The parents carry out the preventive measures to insure a child's good health.

Childhood through Adulthood.--Generally it was left up to the individual or, in the case of a young child, to the parents to look after his or her health on a day-to-day basis.

Girls' Puberty Rite.--The social organization involves only the girl herself and the elderly female relative who functions as the girl's attendant and assists her by performing certain rites to insure the girl has good health. The attendant is paid with the hat and old clothes of the girl. Although the parents have a role to play in some of the practices surrounding puberty, their role does not involve measures influencing the girl's health. These measures are undertaken by the girl and her attendant.

Pregnancy and Childbirth.--Other than the extensive activities undertaken by the parents to insure an easy delivery and to insure that the child will be healthy and of good character, the only other individuals involved are the midwives. No information could be found on who became a midwife, how they learned their task, whether they were paid for their services, and so on.

Death and the Dead.--It appears to be left up to the individual or, in the case of children, to the parents (Boas 1966: 377) to take measures to safeguard against attacks by ghosts.

### 3.2.2 Analgesics

There seem to be no individuals who were specialists in controlling pain, although shamans might use an analgesic technique while treating illnesses caused by object intrusion (Boas 1966: 142). Other analgesic practices appear to have been carried out by anyone familiar with the techniques.

### 3.2.3 Surgery

No information could be found on who it was who performed surgical operations. Boas notes that shamans might cut a swelling and suck out the blood (1966: 383), but it is not clear if this practice should be regarded as a surgical procedure or as a special treatment for an intrusive object illness.

### 3.2.4 Burns and Injuries

It appears that most women knew how to treat burns (Boas 1966: 383). No information was found on who treated injuries, but it seems likely that most people would know how to treat ones of a simple nature.

### 3.2.5 Ailments

Concerning the treatment of ailments, Boas states, "The knowledge of medicine is not confined to one sex, but women seem to be more familiar with medicinal herbs and their use" (1966: 376). Everyone knew something about remedies, particularly the most commonly used ones, although in each village there were generally one or two people who had a more extensive knowledge and could be consulted about the less commonly known remedies (Curtis 1915: X, 64; Turner and Bell 1973: 297). Traditional rules dictated which relative should gather, prepare, and give the remedy to the patient (Turner and Bell 1973: 297). Where these rules are known, they have been listed in the table in Appendix A. On the basis of the limited information available, it is not possible to discern what the principles

underlying the rules were.

### 3.2.6 Significant Illnesses

Intrusive Object Illnesses--The cures for illnesses caused by intrusive objects usually involved a single shaman, although Koskimo shamans preferred to work four at a time. If the cure is undertaken by a newly initiated shaman, he may be supervised and assisted by other shamans (Boas 1966: 142-143). Besides the shaman, there are generally four male or female assistants to help the curer as well as singers and individuals who beat time to accompany the curing ritual. Since cures are public events, there are spectators present as well.

Soul Loss Illnesses.--The cures for soul loss illnesses appeared to involve a single shaman who conducts the cure with, occasionally, another shaman as an assistant (Boas 1966: 139). The shaman may also be aided, on occasion, by four assistants who are not trained as shamans (Boas 1966: 139). Spectators are present and the ritual is accompanied by singers and individuals who beat time.

The spectators at cures for intrusive object and soul loss illnesses include all the old people in the community. Younger men and women would be barred from the proceedings if they were considered ritually impure due to menstruation or recent sexual intercourse.

Sorcery-induced Illnesses.--The social organization involved with illnesses caused by sorcery appeared to involve primarily the sorcerer, who is not a specialist but

may be any person, usually a male, who has learned the art, and the victim, who is the one who usually carries out or arranges for the procedures to counteract the sorcery with the aid of friends and relatives. A shaman may be brought in to diagnose the cause of the illness and to suggest means for curing it (Boas 1966: 127-128), but it is generally up to the victim, his friends and his relatives to see that the cure is carried out.

Curtis states that sorcerers practiced their art on the orders of the numaym heads against the heads of rival numayms (1915: X, 64). He also states that sorcerers could be brought in to help with a cure (1915: X, 76-78). Boas's information (1966: 152) makes no mention of sorcerers being linked to numaym heads or of sorcerers assisting with cures. Boas's information, as well as the account of witchcraft recorded by Curtis (1915: X, 67), tend to suggest that sorcerers acted on their own initiative against personal enemies and rivals and, if discovered, would be ostracised by their own numaym, if not killed. It is difficult to know how to reconcile Curtis's assertion that sorcerers were public figures with information suggesting that they kept their identities secret.

Significant Illnesses in General. -- Considerable attention may be paid to the social organization associated with significant illnesses. In evaluating the information on such illnesses, the role of the shaman merits detailed attention.

Boas asserted that there were several degrees of shamanistic practice among the Southern Kwakiutl (1966: 120). The first degree included all those shamans who could both cure and throw disease. They are usually males although female shamans were by no means uncommon. These shamans worked at the direction of the numaym heads. It is these shamans Boas studied most extensively and to which most of the following information pertains. The second degree covered those shamans who could cure but could not throw disease. These shamans are usually women. Their cures consist of building up the supernatural power in the patient. They are often resorted to when a shaman of the highest degree has given up a patient as incurable (Boas 1966: 147). The third degree involved those who could locate a disease in the body but could not extract it. The fourth degree involved those who had been cured by a supernatural power which showed itself to them in a dream or vision but had not received the ability to heal. Lacking further information on these last individuals, it is not clear why Boas included them among the degrees of shamanistic practitioners.

The information on whether or not shamans of the highest degree were members of a secret society or secret societies is not clear. George Hunt, Boas's principal informant and himself a trained shaman, indicated that he knew of Nakwotak and Koskimo shamans meeting in groups in secret meeting places (Boas 1966: 124-125; 1930: 20-22; Curtis

1915: X, 91). The assistance of shamans in instructing a novice, initiating him, and supervising his initial curing performance certainly indicates some degree of cooperation among shamans. Whether they functioned as a secret society or had an organization analogous to that of a secret society, however, is not certain.

The members of the secret societies involved in the winter ceremonies believed they were initiated by identical spirit patrons. They maintained and passed on a body of shared ritual knowledge and prerogatives to the novice they initiated. The societies were ranked relative to one another, had their own special roles to play in the performance of the winter ceremonies, and had their own songs, dances, masks, names, and insignia. Since each society had its own special roles to play, the societies had to be interdependent in performing the winter ceremonies for the ceremonies required numerous participants. Membership in a secret society was inherited, but members of different numayms were included in each society. Consequently, the membership of a society cut across numaym and sometimes even community ties.

It would appear that the shamans in an area trained their novices and initiated them in a ceremony somewhat similar to that used for the novices of the secret societies of the winter ceremonies. They too had a body of secret information and practices and they too cooperated in the rituals for curing. Boas claimed the Koskimo shamans were

divided into two societies that regulated who was to cure a particular patient and that split the payment for a cure among the membership (Boas 1966: 145). While the Koskimo shamans may have had an organization like a secret society, it is not clear that shamans in other areas were regarded as part of such a society or shared such a strong group identity. Rivalry among shamans was not unknown. Shamans certainly did not function in public events as a secret society. There is no doubt, as will be seen in the following section, that those who were members of the Shaman Society which participated in the winter ceremonies were different individuals than those shamans who practiced curing. It seems possible that, excepting perhaps the Koskimo shamans, shamans cooperated with one another to some extent, but lacked the formal organization associated with the secret societies of the winter ceremonies.

The question of how a shaman learns his art bears examination. Seemingly novices learned the techniques of curing from other shamans in the community. Since the shaman had a role in the numaym organization they sometimes, but not always, acquired the role of shaman through inheritance. The position of the shaman assigned to the numaym head seems often to have been inherited (Boas 1966: 136). Generally, however, novices were individuals who had served a shaman as an apprentice or as an informer supplying a shaman with information on the health of people in the community. Frequently, fits or fainting spells were

taken as a sign that an individual had a special aptitude for becoming a shaman. In these cases, the novice became a shaman through his own talents and without reference to any factors of inheritance. But, whether an individual acquired a shaman's powers through inheritance or through individual initiative, the initiation strongly suggests that the power to cure ultimately is acquired through the successful individual contact of the novice with his patron spirit-being and not by the decision of the relatives that a particular individual might make a good shaman.

In conventional initiation accounts, the prospective novice becomes ill either due to a legitimate illness or an illness induced by fasting or purging. In a dream or vision the novice has contact with a supernatural being, often the toad, wolf, or killer-whale (Boas 1966: 135), and utters the shaman's cry, "Hū hū hū." The novice is placed in a new, purified isolation hut for four days during which time he is in contact with the supernatural being through dreams or visions. After four days the shamans of the community go to him singing their songs and the novice answers with the song he has acquired from the supernatural being. The shamans return to the novice's numaym house to purify it and prepare it for the novice's appearance. At dusk the spectators bathe to purify themselves and gather in the house. The novice enters singing his song as time is beaten. He mentions the identity of the supernatural being who gave him his power. He then gives a power

demonstration by pointing out any sick person in the house and performing the appropriate ritual to cure him. The novice's father gives him the name of someone who was previously a shaman in the numaym. Four days later the father holds a feast as payment for those who witnessed the initiation (Boas 1966: 133-134).

The power acquired by the shaman is not his to use completely on his own initiative. For each curing ritual he performs while a shaman he must again invoke the assistance of the supernatural being who bestowed the power.

Although the novice's name is that previously held by a shaman of his numaym, the use of the name is believed to be granted by the supernatural being, his spirit helper. The name given to the novice is used by him all year round and is not changed during the period of the winter ceremonies. It is interesting to note that shamans' names, when translated into English, often connote "life", the ability of the shaman to help others, or the shaman's supernatural power. Examples of these names are: Life-Owner, Making-Alive, The-One-whom-(people)-have-to-go-to, and Supernatural-Power-Face (Boas 1966: 135).

The shaman's role involved the ability to cause or cure illnesses and, associated with this, the ability to be able to make a prognosis about the course of an illness. They were not clairvoyants or seers. They could not insure economic ends by influencing the quantity or movements of

animals or by influencing the weather. They had no role in the winter ceremonies other than perhaps treating illness or injury in a participant. Their area of concern was solely involved with illness and curing.

The acquisition of the special powers, believed to have their locus in the pit of his stomach, that set a shaman off from ordinary people was underscored by ritual prescriptions. The shaman was expected to be sexually continent for periods ranging from a few months to many years. He should use his left hand rather than his right. He must not wail for the deaths of relatives. He must not laugh or sing love songs. Failure to adhere to these rules could result in the loss of his power or in his becoming ill or dying.

Brief note may be made of the payment given a shaman for his services in curing a patient. Payment seemed to be determined in part by how long a shaman had practiced, since he could not accept payment for cures for four years after his initiation. After this four year period the shaman was supposed to accept what was given to him, although he could refuse to carry out a cure if the payment seemed too low or not to his liking (Boas 1966: 137). The rank of the patient also seemed to influence the amount of the payment (Boas 1966: 144). It seems likely that the higher the rank of the patient was, then the more elaborate the cure, the higher the payment, and the more prestigious the shaman if the cure succeeded. The shaman's informant

who assists him is said to receive one quarter of the shaman's payment (Boas 1966: 124) and it seems likely that the assistants, beaters, and other helpers were paid as well. Whether shamans went unpaid if the cure failed is not recorded in the ethnographic data.

It is doubtful that a shaman's practice was extremely lucrative, although it could provide a moderate income. Boas reports that for a cure a shaman "may receive a payment of about ten blankets if the patient is of noble birth" (1966: 144), although Curtis reports a payment of one hundred blankets for a person of very high rank and great wealth who was seriously ill (1915: X, 93).<sup>2</sup> Curing rituals were probably not conducted very frequently. During a practice of four years duration, one shaman only treated twelve patients (Boas 1966: 132). The use of the term *a'ya* (Boas 1966: 170) for the payment of a shaman, a term used elsewhere only when a supernatural being is "paid" for its assistance, may indicate that the intent in paying a shaman is not to reward him for his skill or services but rather to somehow pay the power of his supernatural spirit-helper for curing the patient. The principal attraction for becoming a shaman may be as much the social prestige attached to the role as any monetary gain.

### 3.3 Ideology

#### 3.3.1 Preventive Medicine

Birth and Early Infancy. --The ideology involved with preventive measures at the time of birth and during early

infancy will be discussed as part of the topic of pregnancy and childbirth.

Childhood through Adulthood.--Ordinary preventive medicine is related to how the Southern Kwakiutl viewed himself and how he viewed the world around him. Postal, in a content analysis of Kwakiutl tales, myths, and autobiographies (1965: 455-462), pointed out that strength in an individual involved three qualities: "beauty, physical power, and wealth" (1965: 456). Conversely, weakness is attributed to an individual if he is "sick, blind, ugly, or abandoned" (1965: 456). Consequently, good health and physical perfection may be seen to have been valued. Postal's analysis suggests that threats to the well-being of an individual are seen to come from outside the body in the external world. Thus, in Southern Kwakiutl medicine much concern is focused on strengthening the body against the external attack of illness by means of preventive medicine or on expelling illness from the body once it has intruded. Illness is combatted outside the body to prevent its entry. Should illness penetrate the surface barrier of the body, then treatment will often focus on removing the illness.

A notion that was developed further elsewhere in the field of medicine is the belief that material such as blood, excrement, and so on, which were once in and of the body and have passed out of the body, can be used to influence the health of an individual adversely. An idea to be discussed more fully in connection with ailments is the

belief that living things have the ability to influence health, not because of any physical or chemical property, but because of the powers of the spirits they were thought to possess (Turner and Bell 1973: 297).

Girls' Puberty Rite.--The beliefs about menstrual blood need to be mentioned here. Boas refers to its harmful influence in his note on women's periods:

A woman, during her period, must not go near a sick person or a newborn child. If either is in the house in which a menstruating woman lives, he is taken out of the house. Formerly, they hid the fluid, which is caught in a diaper of cedar bark, in a dry place under a cedar tree. If it should get wet, they would lose more blood. When the period is unduly prolonged, they use leaves of the thimble-berry (*tse'qeimas*) to catch the blood. It is believed that this shortens the period. A menstruating woman does not need to stay in her room. She must keep away from the sea and from the river, because otherwise the fish would cease to run. She is allowed to attend all festivals and the winter dance.

She must not eat fresh fish and fresh clams. She must not work on fish. She may pick berries and dig roots. She may eat out of the same dish and spoons as others (1966: 370-371).

Since menstrual blood is perceived as potentially harmful and contaminating, it is perhaps understandable why the secluding of the girl from others at the time of her first period is practiced. That the blood is thought to be contaminating is seen by the use of a cedar bark purification ring and by the practice of ritual washings.

It is noteworthy that the presence of menstrual blood in the house is regarded with as much concern as the

presence of the afterbirth when a child is born. In both cases any sick individuals must be kept away from the contaminating influences of the blood or it is thought their condition would deteriorate (Boas 1966: 361, 370; Curtis 1915: X, 96).

Pregnancy and Childbirth.--Several points emerge from the data. It may be noted again how much the Southern Kwakiutl believed that external occurrences influenced health. The use of the ritual number, four, in the performance of actions or to measure periods of time appears several times. The special powers attributed to the tips of spruce and hemlock tree branches and to cedar bark are mentioned in connection with the *pe'spatq!ala* techniques. It would seem that they were thought to counteract the contaminating influences of afterbirth and menstrual blood (Boas 1966: 378).

Most of the activities undertaken by the parents focus not only on the mother's safe and easy delivery of the child, but perhaps more significantly on trying to insure that the child has "beauty, physical power, and wealth" (Postal 1965: 456) and is of good character in later life. The concern about the ill effects on a sick person from the blood in the afterbirth (Boas 1966: 361) underlines the Southern Kwakiutl idea that body parts or wastes can have a harmful effect on health. The use of blowing to remove something or to put something into the body is not uncommon in Southern Kwakiutl medical practice (Boas 1966: 361).

The positive connotation of being right-handed or doing things with the right hand as opposed to the negative connotation of the left hand comes out in the description of how the newborn child was lifted from the birth pit (Boas 1966: 361). These themes, attitudes, and ideas appear again and again in the ideology surrounding many of the other parts of Southern Kwakiutl medicine.

As a parenthetical note to the discussion of pregnancy and birth, a comment may be made on the beliefs about the birth of twins (Boas 1966: 365-368). Twins are considered to have special supernatural powers and were thought to be salmon who have been transformed into men according to the myths (Boas and Hunt 1905: 375). Twins are believed to have the power to influence the weather and the salmon-run. According to Boas, they could cure diseases using a large square rattle (1966: 368), but he does not elaborate on how this was done.

It is interesting to note that the parents of twins had their activities severely restricted and lived in a seclusion hut for a year following the birth. During this time they were believed to be particularly vulnerable to sicknesses (Boas 1966: 366). In the course of presenting the information on Southern Kwakiutl medicine, several situations have appeared where the seclusion hut was used or an individual was placed in seclusion.

Death and the Dead.--The Southern Kwakiutl attitude to the dead appeared to be one of ambivalence. Ghosts are feared

for their ability to cause illness or death (Boas 1966: 168-169) and yet can be called upon to intercede and restore the health of a sick person (Boas 1966: 165). Corpses are regarded as powerful contaminating influences (Boas 1966: 378) and yet human skeletal bones are part of the pharmacopoeia (Boas 1966: 387). It appears that the dead are imbued with power that can be used for good or ill.

### 3.3.2 Analgesics

No information could be found on the beliefs underlying techniques for handling pain, although it would appear that it was thought that additional pain inflicted elsewhere on the patient's body would dull the pain of his illness or injury.

### 3.3.3 Surgery

No data on the ideology surrounding surgical procedures could be found.

### 3.3.4 Burns and Injuries

No ethnographic information on the ideology surrounding burn treatments or the treatment of injuries could be found. However, the application of material to soothe and heal the burn appears to be the main purpose of burn treatments (Boas 1966: 383). Many treatments for both burns and injuries appear to be based on empirical knowledge of the human body.

### 3.3.5 Ailments

Definite beliefs existed about how plants and animals worked in treating ailments. The Southern Kwakiutl thought

that it was not simply the properties of plant and animal matter that made them effective as remedies but, perhaps more important, the spirit of the plant or animal that determined if the remedy would work or not. To try to insure an effective cure, plant material had to be gathered and handled in a ritually correct manner. Medicinal plants had to be collected in the early morning before any food was eaten or any work begun (Boas 1966: 376). Invocations were directed to the plant asking it to use its power to produce a cure. For example, a man gathering plant material to treat an ailment of his wife might use the following formula:

When gathering roots of a hemlock tree, tips of juniper, and roots of two kinds of fern, he prays to the last one, sitting in front of it, "O friend, I have come to you in the manner you gave in a dream to my late grandfather, for he was told to come to this supernatural ground where you grow and our friends hemlock tree and juniper bush and fern and you yourself, that you may go and, please, help one another with your powers to cure my poor wife (Boas 1966: 158).

Animals may also be addressed in a similar manner when they are involved in a cure as the following example will show:

When a person spits blood, he gathers the blood that he expectorates in some very soft, shredded cedar bark. All that he expectorates on one day is put into one bundle of cedar bark. Four such bundles are made, each containing the expectoration of one day. Then they wait for a killer whale to appear; and as soon as they see one, somebody paddles out in his canoe,

throws the four bundles overboard, and prays, "I beg you, supernatural one, to take pity on my friend and to restore him to life!".... Then he turns once in the canoe and throws the bundles overboard, saying, "That is his sickness".... Then the killer whale will stop and look at the bundles, and the sick one believes he will recover. The same is done with wolves. In this case, the cedar bark is wrapped in a piece of meat. It is eaten by the wolves. They also pray to the wolf in doing so (Boas 1966: 380-381).

Traditional rules indicated how the plant or animal should be addressed and the manner for preparing the remedy (Turner and Bell 1973: 297). Often the handling of the remedy involved the ritual number, four. Four pieces of material might be used or the remedy taken four times.

Many descriptions of treatments with remedies given by Boas end with an indication that the patient usually gets well. Turner and Bell reported that their informants placed a great deal of confidence in the efficacy of medicinal plants. They note that "many of the plants used as medicines by the Kwakiutl are actually known to contain pharmaceutical drugs, and some of them, including Veratrum viride and Rhamnus purshiana, are being used commercially at the present time" (1973: 297).

Boas attempted to explain the relationship between the people's awareness that the use of certain plants produced certain reactions in the patient and the belief that it was the plant's spirit and not the plant itself that produced the result:

The prayers to medicinal plants, of

which a few examples have been given, demonstrate that the properties of the plants have been discovered by observation .... Nevertheless, they are given a religious connotation because they become efficacious on account of the prayer addressed to the plant. When used without these prayers or other indications that supernatural powers are involved, these would be analogous to acts based on experience, in other cases accepted as correct because assumed to be based on experience. The difficulty of drawing a clear line between causally determined and magically determined may perhaps be illustrated by an example. If, in doing some woodwork, someone spoils his work repeatedly when using a particular knife, he may say, "That is an unlucky knife" and refuse to use it. The word "unlucky" implies, no matter how weakly, an uncontrollable "supernatural" power. If he should take it up some other day and say to it, "I hope this time you will behave better," it may be merely a linguistic form, but it may also imply the idea that on account of his expressed wish (or prayer) it will be more willing to obey his hand.

I feel certain that a clear distinction between happenings whose interrelation is understood purely as those of cause and effect and others that imply or express explicitly the presence of something supernatural cannot be sharply drawn.

Some of the most complicated magical acts of the Kwakiutl for which no reasonable empirical origin can be given find their sanction in the belief that the mythical animals from whom man is descended instituted these acts (1966: 162-163).

### 3.3.6 Significant Illnesses

Intrusive Object Illnesses.--Although the beliefs about illnesses caused by intrusive objects attribute the immediate cause of the disease to the tangible disease object, the ultimate cause is attributed to hostility or accident.

The object may have entered the body by accident and have to be removed. Or, the object may have been thrown into the body by a shaman, often at the request of an enemy or rival (Boas 1966: 141). The victim must be within view of the shaman who, holding the disease object in his hands, throws it into the victim's body (Boas 1930: 270).

Soul Loss Illnesses.--Loss of the soul is attributed to its being drawn out of the body or lost in some other way.

Supernatural beings may take the soul away. A sudden fright may dislodge the soul from the body. The soul, leaving the body during dreams, may return to the body too quickly and, "coming in crosswise or upside down, is not able to disentangle itself" (Boas 1966: 140). It is believed to be dangerous for a person to walk past behind a shaman who is eating, for the shaman may swallow the person's soul.

Among the Southern Kwakiutl, the soul is believed to be located in the head. The soul "has no bone and no blood, for it is like smoke or like a shadow" (Boas 1966: 169). Its absence from the body causes weakness in its owner which, if the soul is absent for too long, results in the owner's sickness.

Sorcery-induced Illnesses.--It is important to note that the Southern Kwakiutl distinguished the shaman's ability to cause illness by throwing disease from sorcery. The shaman's ability to cure illness may not be so totally distinct from sorcery, however. Boas recorded the word *pet'a*, "to cure with medicine," also being used by the

Southern Kwakiutl to mean "to bewitch" (1966: 148). The Bella Bella, living to the north of the Southern Kwakiutl, use the word *ē'qa* to designate both sorcery and medicine (Boas 1966: 148).

Unlike the case with illnesses caused by soul loss or object intrusion, the Southern Kwakiutl believe sicknesses attributed to sorcery may be prevented through the careful disposal of body wastes and parts so that they cannot be acquired by a sorcerer and through using techniques of preventive medicine specifically aimed at sorcery.

The ultimate cause of sorcery-induced illnesses or deaths may be attributed to the actions of enemies or rivals. The use of sorcery for these purposes is, without any question, seen by the Southern Kwakiutl as an act rooted in hostility or aggression and calling for revenge upon the sorcerer (Curtis 1915: X, 65; Ford 1941: 95-98).

Significant Illnesses in General.--A brief summarizing note may be made about the ideology associated with significant illnesses.

The key to the treatment of significant illnesses is that the techniques used in the cure are determined by the theory of the disease (Boas 1966: 137). In the case of illnesses caused by intrusive objects, the idea that a disease object can be thrown into the body suggests a cure in which the object is drawn or forced out. For illnesses caused by soul loss, the idea that the soul can be extracted or lost from the body suggests a cure in which the soul is

restored. For illnesses involving sorcery, the idea that a sorcerer can use material associated with the victim to cast a spell suggests the idea that measures can be taken to counteract or break the spell.

It is interesting to note that although cases of soul loss or object intrusion may be caused by accident all significant illnesses may also be attributed to other persons or supernatural beings wanting to harm the victim in some way, whether through sorcery, throwing disease objects, or stealing the soul.

#### 3.4 The Interrelationships of Technology and Techniques, Social Organization and Ideology

The interrelationships of the technology and techniques, social organization, and ideology of the parts within the field of Southern Kwakiutl medicine may now be considered briefly. It would appear that the different parts were linked together by some shared techniques and technological items, key symbols and underlying beliefs, but that there was no single unified group of practitioners or specialists in the field of medicine.

On the technological level, numerous plant and animal materials used in preventive medicine are the same as those used to treat ailments and burns and injuries. The purification ring, used at the time of a girl's puberty, is also used to treat soul loss, a significant illness. An isolation hut may be used for a girl's puberty rite, to prevent ghost sickness, and to treat cases of soul loss and

object intrusion.

Similarly, techniques used in one area of medicine may be used in another. The technique of using the hut or room for isolating individuals is common to the girl's puberty rite, the prevention of ghost sickness, and the treatment of illnesses caused by soul loss or intrusive objects. The technique (and belief) involved with purification requiring the use of a purification ring is common to the girls' puberty rite, where the individual is in a contaminated state from the menstrual blood, and to the treatment of soul loss illnesses, where the purification of the patient is an aid to enticing the soul back to the body. Similarly, some plant and animal matter may be prepared with the same techniques and used both on a preventive basis and to treat ailments.

As has been noted, with respect to the social organization associated with Southern Kwakiutl medicine, there was no single uniform organization within the field of medicine as a whole.

On the level of ideology, however, there are extensive linkages. These links tie, not only the ideologies of the different parts of the sphere of medicine together, but tend also to tie technology and techniques to ideologies and may cast light on why certain things are used in certain ways to attain certain ends.

There is a belief common to all parts of Southern Kwakiutl medicine that supernatural power can be manipulated.

to insure or restore good health. The means by which this was done often involved particular techniques. Ritual purity was an aid to success in gaining supernatural aid, so that fasting, bathing, isolation, and purging were important techniques to insure successful contact with supernatural beings. Impure and contaminating matter like blood or parts of human corpses were to be avoided if possible. Spirit beings, it was thought, could be manipulated by magical techniques, by persuasion through prayers, by propitiation, or through direct contact in dreams or visions.

With the exception of the shaman who is called upon to use his unique ability to manipulate supernatural power solely to aid others, attempts to manipulate power to insure or restore health were ordinarily undertaken through individual initiative.

In Southern Kwakiutl ideology, a major defense against illness appears to be supernatural power. It can be of aid in strengthening the body against attack. Should illness penetrate the surface barrier, it may be called upon to assist in expelling the illness from the body.

For the Southern Kwakiutl, there were objects, creatures, or activities to which supernatural force or power influencing health could be attributed. Water and bathing were connected with purification. Cedar bark and the tips of hemlock or spruce branches were symbols of ritual purification and for this reason materials from these

trees may have been the preferred source of the materials for making a shaman's regalia, rattle, purification rings, and the isolation hut. Corpses and blood from the body's orifices, whether it is menstrual blood, afterbirth, or bleeding from the mouth, are linked to contamination and impurity. Urine, feces, blood, breath or saliva, sweat, hair, and nail clippings were all things that had been in or of the body and could be used in a negative way to influence the health of the person they came from.

Animal beings, like the toad, wolf, and killer-whale, were linked to the healing power of the shamans, although other spirit-helpers existed as well (Boas 1966: 135). The shaman's spirit power was symbolized by his regalia covered with eagle down, his rattle, the purification ring, and the pouch on his neck ring containing the disease objects and the quartz crystal representing his power.

Activities may be infused with power as well. Supplications, songs, movements in dancing, ritual bathing, the use of the number four, and the preferred use of the left hand by the shamans are examples of such activities.

Finally, in Southern Kwakiutl thinking, the body has sites where power is thought to concentrate. The outer surface of the body through which it is feared illness may penetrate, the pit of the stomach in which supernatural power is located, and the nape of the neck or crown of the head where the soul is situated all appear to be conceived

of as loci of power in the body,

#### 4. MEDICINE AND ITS SOCIO-CULTURAL ENVIRONMENT

In the following pages the articulation of Southern Kwakiutl medicine with its surrounding socio-cultural environment will be examined.

##### 4.1 Technology and Techniques

In order to seek points where the technology and techniques of medicine articulate with the rest of the culture, aspects of technology and techniques which are not part of the field of medicine itself but which duplicate, either wholly or in part, aspects of it will be examined. This is based on the supposition that things which appear similar may, in fact, be related to one another in some way.

##### 4.1.1 Plant and Animal Material

Looking first at the plant and animal matter which forms so much of the technological basis for the treatment of ailments and for preventive medicine, knowing where else in Southern Kwakiutl plants and animals are used in a similar manner is important. Similar uses for some plants are found in the realm of subsistence.

When plants are considered simply as a food item, it may be recalled from the data on remedies and preventive medicine that a few plants were eaten not simply for their value as food, but because they contributed to some aspect of good health. Conversely, some foods might be avoided on certain occasions. For instance, at puberty a girl should not eat roots or fresh fruit lest her teeth fall out (Turner and Bell 1973: 295). On the whole, however, plant and

animal material that was used for medicinal purposes was prepared and used in a different manner than if it was being used for food.

Plant and animal matter was used very extensively by the Southern Kwakiutl to make utensils and artifacts for everyday use, but this fact had little to do with medicine except insofar as these materials were used to make the paraphernalia used for curing rituals.

All plant and animal material was drawn from the environment in which the people lived. Plants like Lomatium nudicaule and Shepherdia canadensis, although they grew in Southern Kwakiutl territory, were very unusual in that occasionally they would also be obtained as trading items from adjacent Coast Salish groups. Nicotiana is the only non-native plant species and is a recently introduced addition to the Southern Kwakiutl pharmacopoeia.

#### 4.1.2 Winter Ceremonies

In the technology and techniques associated with the winter ceremonies there are some duplications of items and practices associated with medicine.

The season of the ceremonies, or Tsetseka, was the period of elaborate ceremonial performances during the bleak, wet winter months. This sacred season marked the time when initiates to the secret societies had contact with their spirit power and were installed in their new statuses and roles in the secret societies. The initiates and the already established members of the secret societies

displayed their spirit power through the songs, dances, and ritual performances.

Many of the costumes, such as those of the Cannibal dancers and the Throwers, are similar to those of a shaman, although each costume had distinguishing characteristics. A blackened face and dance aprons, headrings, neckrings, armrings and anklets were common elements in many costumes (Boas 1966: 183, 188, 194, 202, 270) just as they were common elements in a shaman's costume.

In seeking techniques in the winter ceremonies that resemble those employed in medicine, four activities bear examination: (1) the performance by the Thrower; (2) the Soul Catcher dance; (3) the purification ritual for the Cannibal dancer; and (4) the use of a purification ritual for a dancer who falls while performing.

Performance by the Thrower.--In the Thrower's performance techniques may be noted that are reminiscent of the shaman's power to throw disease to cause intrusive object illnesses. Boas has given a description of a performance by a Thrower during the winter ceremonies at Fort Rupert in 1895:

Soon after the end of the ceremony, the song of a man was heard in front of the house. He approached slowly. Now the door opened and a naked person, wearing only an apron, a headring of red cedar bark, armrings, and anklets of the same material, appeared. He stayed in the doorway for a long time, singing his sacred song. Then he came forward, looking upward, his hands laid flat to the back side of his thighs. With short quick steps he ran around the fire. The audience became restless, because they feared him, the Thrower

(<sup>ε</sup>ma<sup>ε</sup>măq!a), the thrower of sickness. When he entered, all the Cannibal dancers had to leave the house. As soon as he began his circuit, a man holding a rattle ran up to him and followed all his movements. As soon as the <sup>ε</sup>ma<sup>ε</sup>măq!a came to the rear of the house, he gave a high jump. The drummer beat the drum rapidly, and all of a sudden the <sup>ε</sup>ma<sup>ε</sup>măq!a caught his magical stick, which he held between his palms, drawing it out long and shortening it again. Suddenly he threw it into himself. The staff disappeared, and he fell backward in frightful contortions. Blood came pouring out of his mouth and out of his chest. After some time, he pulled the stick out of his mouth, recovered, and continued his dance. He tried to catch the stick again, looking upward and holding his hands close to his thighs. As soon as he caught it, all the people arose, and when he threw it, they stooped down, hiding in their blankets and crying "wa." The first time he threw his stick it did not hit anyone, but when he threw the second time, two young <sup>ε</sup>Na<sup>k</sup>!wax<sup>·</sup>da<sup>ε</sup>x<sup>·</sup> rushed forward, blood pouring out of their mouths. After some contortions, they lay there dead. The man who had accompanied the dance of the <sup>ε</sup>ma<sup>ε</sup>măq!a with his rattle was acting as though the stick had entered his throat and was suffocating him. As soon as the <sup>ε</sup>ma<sup>ε</sup>măq!a had thrown the second time, he disappeared in the secret room in the rear of the house. Soon he reappeared, singing over the dead, who were carried into the sacred room. Shamans were called, who sang over them and cried "hiip", while the <sup>ε</sup>ma<sup>ε</sup>măq!a danced a third and a fourth time, catching and throwing his stick, without, however, hitting anyone (1966: 194-195).

It would seem that the Thrower's performance mimics the shaman's power to throw intrusive objects into others.

Soul Catcher Dance.--The Soul Catcher dance is also linked to medicine to some extent. This dance reflects Southern

Kwakiutl ideas about soul loss but, unlike the Thrower's performance, it does not mimic the shaman's ability to cause or cure illness. The performance of the Soul Catcher dance seems to have as its main purpose the giving away of property by those whose souls are caught.

Boas's description of the Soul Catcher dance was recorded during the same ceremony in which he witnessed the Thrower's performance:

In the morning, the Koskimo held a secret meeting, at which it was decided that Q!e'q!EnqwEla (?) was to show the dance ba'bakwayut (soul catcher). In this dance, the dancer pretends to capture the soul of one of the audience; but a certain amount of property is made to symbolize the soul. When, therefore, a dancer catches a soul, it means that he takes away from the owner a certain amount of property, which is to be distributed among the guests. Therefore the speaker asked at this meeting, "Q!e'q!EnqwEla is going to show his dance. I want to know if anyone wants him to catch his soul." Whoever intended to distribute blankets offered his soul, saying, "Q!e'q!EnqwEla, catch my soul, for I want to give away blankets to our rivals." The speaker thanked them for their offer. The soul was represented in the dance by a small ball of eagle down, which was attached to a string. As many balls were attached to the string at equal distances as there were men who offered their souls to be captured (1966: 195).

It may be noted that although Hawthorn (1967: 367) stated that Kwakiutl shamans used a soul-catcher, a small ornate box with a stopper in which a soul may be trapped, neither Boas nor Curtis make any mention of its use among the groups under study here. Even in descriptions of the

Soul Catcher dance (Boas 1966: 195, 234-235, 209-211) it is not mentioned as a prop.

Purification Ritual for the Cannibal Dancer.--The purification ritual for the Cannibal dancer resembles the cure for soul loss and the purification of the girl in the puberty rite in its use of a purification ring. In the course of the ritual the Cannibal dancer is ritually bathed and passed through the purification ring by a helper called a "washer" and by an individual who handles the ring in the ceremony:

Then the one handling the rings calls the washer to come to the Cannibal dancer. The washer goes around the fire four times, stops at the dish holding the water, and, after three feints, dips water out with his hands. He holds the water in his two hands, goes around the fire, lifts it toward the sun, turns around, and puts it on the head of the Cannibal dancer, softly stroking the latter. Then he takes more water and puts it again on the Cannibal dancer's head in the same manner. This ceremony is also repeated four times. The assistant of the Cannibal dancer sits next to him. The washer turns around and puts four handfuls of water on her head, in the same way as he put it on that of the Cannibal dancer. Then the one handling the rings rises again, and the time beater beats time. He goes around the fire, carrying the ring; on the west side, he extends it toward the sun. Then he walks around to the Cannibal dancer, turns slowly, and puts the ring over the Cannibal dancer's head, doubling it up and wiping his whole body. The Cannibal dancer first extends his right arm, then his left arm, through the ring. When the ring comes down to his feet, he raises his right leg first, puts it down outside the ring, turns all around on his right foot, then takes up his left

foot and sits down on the mat, facing east. The handler of the ring takes the ring up, turns around, and drops his left hand and raises his right hand alternately.

Again the Cannibal dancer extends his right arm, and he rubs him in the same way as the first time. This is repeated four times. Then the one who handles the ring goes around the fire and performs the same ceremony with the assistant of the Cannibal dancer (Boas 1966: 274-275).

Although it is not clear precisely what function the purification of the Cannibal dancer serves in the course of the winter ceremonies, nevertheless the procedure used is clearly similar to the procedure used in the sphere of medicine.

Purification Ritual for a Fallen Dancer.--The fall of a dancer while performing in the winter ceremonies may result in his being passed through a purification ring (Boas 1966: 283). When he falls it is thought that the supernatural power has left the house and the dancer (Boas 1966: 282). The disappearance or death of the dancer is faked so that he can be spirited away and purified of the contamination that was the result of his error in the dancing.

In the case of the purification of a fallen dancer, the belief that passage through the purification ring diminishes the contamination is identical to the belief underlying the use of the ring in the girls' puberty rite.

It may be noted that the two areas of the culture showing an affinity to medicine are the realm of subsistence activities and the religio-ceremonial sphere. In the

discussions of social organization and ideology attention will be paid to both these areas to see if the affinities are more than simply in the area of technology and techniques.

#### 4.2 Social Organization

The social organization associated with medicine articulates with the socio-cultural environment primarily through the person of the shaman.

The parts of the sphere of medicine involving preventive medicine, ailments, and the treatment of burns and injuries lack much in the way of specialists and articulate with the social organization of the rest of Southern Kwakiutl culture only to the extent that everyone practises some preventive measures, most people suffer at some point in their life from an ailment, burn or injury, and most people have some knowledge of how to treat these problems. Moreover, most women experience the girls' puberty rite and pregnancy. In the realms of preventive medicine and the treatment of ailments, burns or injuries, almost anyone may be a patient or a practitioner.

It is only when significant illnesses are considered that specialists are encountered. Here anyone may be a patient, but not all may be practitioners.

Is the shaman's role solely restricted to the field of medicine or does he have a role to play elsewhere? The evidence necessary to answer this question is confusing and must be examined carefully.

#### 4.2.1 Subsistence and Economic Relations

It was indicated in the preceding pages that the shaman might be paid for his services. While this undoubtedly has some influence, how great a factor the payment of shamans is in the Southern Kwakiutl economy is difficult to assess. As has been indicated, the amounts can vary and shamans are not called upon with great frequency to perform the curing rituals. While payments of goods for services do take place and some wealth is transferred thereby, it seems likely that payment of shamans was not a great factor in the economic relations of the Southern Kwakiutl compared to the wealth transferred through feasting and potlatching.

#### 4.2.2 Politics

In the arena of political life, the fear of the power of shamans and suspected sorcerers to cause disease may have resulted in some political influence. But, as will be seen, the shaman acted on the instructions of his numaym head and was probably seen as an adjunct to a powerful numaym head rather than as a powerful political figure in his own right. As for suspected sorcerers, what political influence they might potentially gain through playing on the fears of others was probably overwhelmingly countered by the social ostracism they suffered and the anxiety that the fears and suspicions of others might lead to their being killed (Boas 1966: 149).

It seems likely that in the area of social control, the fear of the ability of shamans and sorcerers to cause

disease was a deterrent factor helping to "keep the lid on" social relationships between rivals. It was probably preferable to express rivalry through, for instance, the "fighting with property" (Codere 1950) of the potlatch than by allowing rivalries to deteriorate to the point where rivals and enemies actively sought one another's death through disease.

#### 4.2.3 Winter Ceremonies

It might be expected, on the basis of the information on technology and techniques, that aspects of the field of medicine would be replicated in the religio-ceremonial sphere and, particularly, in the winter ceremonies.

Linguistic evidence tends to indicate that this is indeed the case. The practice of shamanism is called  $pEx\alpha'$ . The word  $pEx\alpha'la$  can mean a shaman. It can also mean the initiated participants in the winter ceremonies, whose head is called  $pExEme'$  (Boas 1966: 170).

The linguistic connection between shamanism and the winter ceremonies extends further:

The supernatural powers and, with their help the shaman, cure sick people ( $h\acute{e}'lik'a$ ;  $h\acute{e}'lix'ed$  "to begin to heal"), or they sanctify objects ( $l\acute{a}'l\acute{a}e$   $h\acute{e}'lik'as\acute{e}weda$   $\acute{e}wap$  "then, it is said, the water was made sacred"). Therefore the assistant of the cannibal, the highest order of the members of the winter ceremonial, is called "mouth healer" ( $h\acute{e}'lig.Exst'$ ), and it is said of a spirit that he is "the owner of the means of healing" ( $h\acute{e}'lig.ayunuk'$ ) (Boas 1966: 170).

Boas's account of the winter ceremonies at Fort Rupert

in 1895 (1966) contains two accounts of performances by members of the Thrower secret society. A Thrower, as was seen in the account mentioned earlier, may throw "sickness" or cause "injury" to other participants in the ceremonies.

In the first account, already mentioned here (Boas 1966: 194-195), the Thrower tosses a stick, representing the disease object, into himself and then into two participants. When the stick is thrown into the body of a performer, blood pours from the mouth of the Thrower's "victim" and he "dies". According to Boas, shamans were called to restore the Thrower's victims to life.

In the second account (Boas 1966: 200-201), two Nakwoktak shamans enter the dance area with a "dead" boy, who it appears is dead because he made a mistake during the winter ceremonies. After the Throwers pretend to be about to toss the boy into the fire, "the highest *păxăla'* of the tribe" (Boas 1966: 200) is called and restores the boy to life.

Boas also gives two accounts of the healing of wounds by Koskimo shamans during the winter ceremonies. In both accounts (1966: 231-232, 234-235) the victim is deliberately "wounded" and "bleeds" profusely. Shamans then heal the victim.

On the basis of these accounts and the linguistic evidence, a conclusion might be drawn that the shamans who are involved with the curing of significant illnesses also have a role to play in the winter ceremonies. However, a

further examination of the evidence indicates that this is not the case.

The participants in the winter ceremonies are divided into Seals, those who are under the influence of the spirit powers, and Sparrows, those who are the organizers, officials, and managers of the ceremonies (Boas 1966: 174). According to information given by Hunt, the shamans referred to in the accounts of the winter ceremonies are not the shamans involved with curing, but rather are the heads of the Sparrow societies of the different Southern Kwakiutl groups:

I will talk about the head shaman. The "head shaman" is not nearly the same as the shaman of the Kwāg'ut, for the Kwāg'ut call the head man of the Sparrow Society "head shaman." That is the same as q!Entq!adas (place-of-eating-songs) the one who has a headdress of red cedar-bark and who never disappears (to be initiated); that is the "head shaman" of the Kwāg'ut, and they also call him headman of the Sparrow Society. He is not a shaman. However, the Nāk!wax·da<sup>s</sup>x<sup>u</sup> use the name "head shaman" for the headman of the shamans---the head chief of the shamans. They do not call the head of the Sparrow Society "head shaman;" they call him WādanEm. He is the head of the Sparrow Society of the Nāk!wax·da<sup>s</sup>x<sup>u</sup>, Gwa<sup>s</sup>Ela, Rivers Inlet tribe, the L!āl!asiqwāla, Gosq'imux<sup>u</sup>, G·āp!ēnox<sup>u</sup>, Gwats!ēnox<sup>u</sup>, and L!asq!ēnox<sup>u</sup>, all of these own the WādanEm, and also the NaqEmg·ilisEla. The Kwāg'ut and Q!ōmoyā<sup>s</sup>yē, \*walas Kwāg'ut, Q!ōmk!ūt!Es, Mamalēlegāla, Qwēg<sup>s</sup>sət!ēnox, Hāxwāmis, Gwawaēnox<sup>u</sup>, and Lēgwāda<sup>s</sup>x<sup>u</sup> ---all four tribes---own the "head shaman," who is not a shaman, on whose head red cedar-bark is placed, and who never dances in the winter ceremonial. The other name of the head man of the Sparrow Society

is "head shaman;" for the "head shaman" is the same as a "doctor" in a museum, who is just called "doctor" but who is not a doctor. It is the same with the "head shaman" of the winter dance. As soon as the winter ceremonial is finished, that man is no longer "head shaman," for he is only like a head shaman in the winter ceremonial when all act in different ways (Boas 1966: 728-729).

The information provided by Hunt is corroborated by evidence drawn from Boas's description of the ceremonies at Fort Rupert. *k!wa'k!waxsdala*, the shaman who played a role in healing the victims in both accounts of the sham woundings (Boas 1966: 231-232, 234-235) is also referred to in one of the accounts as being a "speaker" (Boas 1966: 235), an official position in the Sparrow society. Later Boas refers to a Sparrow society head as "the leader of the ceremonial, the head shaman" (1966: 257).

The evidence for the initiations of shamans and participants in the winter ceremonies tends to indicate that, while there were similarities between the two, there were also important differences.

Both types of initiation exhibit a similar structure in that the initiate acquires his power, is placed in seclusion usually for four days, then appears publicly for the formal initiation ceremony accompanied by the demonstration of his power, and finally a feast is given to the witnesses of the ceremony.

However, although the structure is similar, the actual content of each of the phases differs. The shaman-initiate

acquires his power in the course of an illness or vision. The winter ceremony initiate, although supposed to acquire power directly from his spirit being, actually acquires the power and his right to it through inheritance and by learning the lore about his spirit being. During the seclusion phase, the shaman-initiate is usually placed in a seclusion hut out in the woods and generally left alone to come to terms with his spirit power through his individual efforts. The winter ceremony initiate is secluded in a room in the house where a song-maker composes and teaches him his song and he learns the prerogatives and lore of the secret society he is joining from its members.

During the phase of the public initiation ceremony and power demonstration, the shaman-initiate performs his dance and song and identifies his spirit helper. His power demonstration consists of the performance of cures of sick individuals. Following the initiation a feast is given to those who attended and property may be distributed. The winter ceremony initiate also performs his dance and song and names his spirit helper. His power demonstration, however, consists of re-enactments of the mythical experiences of his spirit being. Following the initiation there is a feast and a distribution of property to those who witnessed the ceremony.

The purpose of the initiation ceremonies is quite different. Of the ceremony for the winter ceremony initiate, Boas reports:

Spiritual beings capture and initiate men and women of the tribe and the object of the ceremonial is to recapture those taken away and imbued with the qualities of their captors and to restore them to a secular condition (1966: 173).

A sign of the initiate's sacred or secular condition is his name. During the season of the winter ceremonies a performer uses the name bestowed by his spirit being, while during the rest of the year he reverts to using his secular name.

The ceremony for the shaman-initiate does not seek to restore him to a secular condition. He uses the name acquired during the initiation for all the seasons. The ceremony appears, rather, to function as a confirmation of his power.

The use of names tends to underscore the idea that a shaman may receive his power at any time of the year, including during the winter ceremonies (Boas 1921: 741), and that he can draw on the power at any time. On the other hand, the winter ceremony initiate receives only by the right of inheritance a specific power at a specific time for use only during the ceremonies.

It can be concluded, then, that the shamans involved with medicine do not have a role to play as such in the winter ceremonies.

Although the shamans involved in the practice of medicine do not have direct ties to the winter ceremonies, they do have direct ties to the organization of the numayms,

the basic social, economic, and political units in Southern Kwakiutl society. Besides having their own geographical territories and material goods, each numaym had its body of crests and prerogatives, names, ranked positions, and secret society positions in the winter ceremonies, all of which were believed to come from ancestors or traditional associations with sacred beings and were passed down through time by inheritance. Shamans' names belonged to their numayms and, although many shamans acquired their power on their own initiative without regard to descent or rules of inheritance, the position of the senior shaman could be inherited (Boas 1930: 11, 271). But, whether the position was acquired by the rule of primogeniture or whether the heir was simply any relative who showed an aptitude is not certain. Boas indicates that such a position could be inherited (1930: 270; 1966: 132), but the testimony of Drucker's informants (1948: 225) raises questions about whether it was inheritance following the rule of primogeniture.

The shamans of a numaym were "owned" (Boas 1966: 146) by the numaym head, were subordinate to him, and carried out his instructions. Their role in political affairs was directly attributed to their ability to throw and cure disease:

The chief's shaman protects his master by throwing disease into his enemy, while the shaman of his adversary's chief tries to counteract the attack (Boas 1966: 146).

It may be noted that, when compared to the available data on the other Northwest Coast groups, the Southern Kwakiutl shamans appear to have been perhaps the most organized. This organization is indicated by the close ties of the shamans to the numaym heads, the cooperation of shamans within a village group in cures and initiations, their sharing of techniques and lore, and the possible presence of organizations somewhat analogous to secret societies among groups such as the Koskimo.

#### 4.3 Ideology

Many of the affinities of the sphere of medicine with other areas of Southern Kwakiutl life find their meaning in a shared ideology.

For instance, the relationship between the use of plant and animal materials for subsistence and for use as medicine is rooted in common beliefs about nature. For the Southern Kwakiutl many items in the natural world were ascribed the attribute of "being" and, as such, had supernatural power. These beings could be called upon to assist man.

All nature, the heavenly bodies, rocks and islands, waterfalls, animals, and plants are beings of supernatural power whom man can approach with prayer, whose help he can ask, and to whom he may express his thanks. Prayers do not have a fixed form that makes them potent by the power of the repetition of the formula. They are all similar in form but express the emotion that fills the one who appeals for help or renders his thanks (Boas 1966: 155).

Before they were gathered or used, plants and animals

would be prayed to in order that they might aid man and cause him no harm. Steps could be taken to enlist supernatural power in obtaining good weather for fishing, a heavy salmon run, and so on.

As stated, both many animals, such as the raven, killer-whale, toad, wolf, and bear, and many plants were attributed with "being" and thought to be of assistance to man. In the origin myths, those plants and animals considered as beings were believed to have been humans who had been changed into their present state by the transformer. Although outwardly changed they still kept their human quality and had the power to help or hinder people (Turner and Bell 1973: 298).

Turner and Bell have argued that this belief must surely have influenced how the Southern Kwakiutl responded to, mastered, and used their physical environment:

The religious attitude of the Kwakiutl towards plants undoubtedly affected their management of the natural environment. Knowing that plants and animals could harm them if they did not treat them properly probably made the Kwakiutl more "conservation conscious" and less likely to destroy living organisms indiscriminately. For example, they never stripped all the bark off a cedar tree, because they would be cursed if it died. This practice led to the good management of a valuable resource (1973: 298).

The belief in supernatural beings found its physical embodiment in the winter ceremonies where the myth associated with these beings was re-enacted in the performances of the dancers. Yet, the winter ceremonies involve more than

re-enactments of myths. In the performances the world of the supernatural beings of myth and the concerns of everyday life interweave.

Thus, the Thrower re-enacts the beliefs about the cause of sickness, a very real concern in Southern Kwakiutl life, and thereby helps to explain how sickness comes about. The head shaman, the official of the Sparrow society, re-enacts the beliefs about the power to cure sickness, another real concern, which helps explain to the people how the shaman can banish sickness. Even though the Southern Kwakiutl are aware that the performances are re-enactments and are not the actual events themselves (Boas 1966: 172), the performances are nonetheless powerful ideological statements about the meaning of life for the members of the culture.

Ultimately it is the concept of supernatural power that underscores so much of the Southern Kwakiutl's orientation, not only to medicine, but to the whole world around him. The concept was the basis for a dualism that structured much of Southern Kwakiutl life. Those objects, living things, geographical features, and the seasons to which supernatural power was attributed were in contrast to those having no such power. The *na'walak*<sup>u</sup>, the supernatural and wonderful, was differentiated from the *ba'xwēs*, the ordinary and profane (Boas 1966: 165-168). In the category of the sacred were the season of the winter ceremonies, the spirit beings, individuals who were seized by supernatural power (shamans,

twins, and dancers), the rights and prerogatives of those seized by power, and the social structure based on the secret societies. In the category of the profane were the secular season of the year when subsistence activities dominated life, individuals and things thought to have no special powers, secular rights and prerogatives, and the ordinary social structure based on membership in the numayms.

Although the concept of power was common among the Northwest Coast groups, the extent to which the dualism between the sacred and the profane was used by the Southern Kwakiutl to structure life was not quite so common. For the Southern Kwakiutl person, the sacred realm had a role to play in his health, in his success in using his environment to secure a livelihood, and in his ceremonial activities.

## 5. CONCLUSION

Having reconstructed what can be known of Southern Kwakiutl medicine and its place in the culture from the available ethnographic data, some general conclusions can be drawn. The different areas within the sphere of medicine were linked together by some shared techniques and technological items, key symbols and underlying beliefs, but there was no single uniform organization of specialists. Some areas of medicine had their own particular specialists but these specialists do not appear to have roles outside the field of medicine. The discussion of the relationship of medicine to the rest of Southern Kwakiutl culture indicated that medicine articulated with several areas within the culture; notably, the religio-ceremonial sphere, as well as the areas of politics and economics.

At this point it would be ideal if it were possible to proceed from the analytical model adapted from White's work to drawing up a model of the Southern Kwakiutl sphere of medicine which would be a replica of how the people themselves conceive of its structure. Unfortunately, given the state of the available data this is not possible. Too much information is still missing to make an attempt at drawing up such a model plausible. A number of questions require further research out in the field to answer. A few of the areas requiring more study involve such questions as the role of patients, the identity of those who tend to become

patients, as well as questions about the roles and functions of the lower degrees of shamans who are not the full-fledged curers and throwers of sickness. Much less data is available about some local groups than about others. Additional information might well alter the picture of Southern Kwakiutl medicine presented here. It would be desirable if more detailed information was available on technological items and on the finer points of ideology, since without such information, statements about these matters will have to remain quite general.

Moving beyond the scope of the present study, a topic that might merit future research is the study of changes in the field of medicine since Boas and Curtis gathered information on it. Clearly medicine has been undergoing change. Boas collected an account of a cure used for cases of soul loss illness that shows signs of Christian beliefs beginning to exert an influence on the curing technique:

The Knight Inlet shaman must have been influenced by Christian teaching. They claim to be initiated by the sun, whom they call He-who-has-us-as-Children (Xū'ngwid), that is, father. They make the sign of the cross, press from the head down along both sides of the body, press the two hands together, and walk around the fire singing their sacred song and praying to the sun. Then the hands are opened. The sickness is supposed to sit on the left palm. By blowing four times over the hand, the sickness is sent away. They burn property as a sacrifice to G·ii, the sun, and in singing, swing a rattle shaped like a bird (1966: 142).

With a more complete body of data and an appreciation

of the effects of change on the field of medicine, a deeper understanding of the workings of this sphere of Southern Kwakiutl culture would be possible.

## NOTES

<sup>1</sup>The following pronunciation key was drawn up by Boas (1921: 47) and is included here as an aid to pronouncing Southern Kwakiutl words presented in the text.

$$\begin{array}{cccccccc} i & e & \hat{i} & \hat{e} & \overset{E}{a} & \hat{o} & o & u \\ \bar{i} & \bar{e} & \bar{e} & \bar{a} & \underset{u}{\bar{a}} & \hat{a} & \bar{o} & \bar{u} \end{array}$$

- E .....obscure e, as in flower.
- i e .....are probably the same sound, intermediate between the continental values of i and e.
- $\hat{i}$  .....i in hill.
- $\hat{e}$  .....e in fell.
- a .....has its continental value.
- $\hat{o}$  .....German o in voll.
- o u .....are probably the same sound, intermediate between the continental values of o and u.
- $\bar{e}$  .....a somewhat doubtful sound, varying greatly in its pronunciation among different individuals between  $\bar{e}$  and  $\hat{e}\bar{i}$ .
- $\bar{a}$  .....German ä in Bar.
- $\hat{a}$  .....aw in law.
- u .....indicates that the preceding consonant is pronounced with u position of the mouth.

	Sonant	Surd	Fortis	Spirant surd	Nasal
Velar.....	g	q	q!	x	—
Palatal.....	g(w)	k(w)	k!(w)	x(w)	—
Anterior palatal.....	g'	k'	k'!	x'	n
Alveolar.....	d	t	t!	s	—
	(dz)	(ts)	(ts!)	—	—
Labial.....	b	p	p!	—	—
Lateral.....	l	L	L!	ʃ, l	—
Glottal stop.....	ʔ	—	—	—	—
	h, y, w				

<sup>2</sup>How large an income a shaman could secure from curing would depend upon the size of the payments and the frequency with which his services were called upon. Codere has estimated per capita earnings for the Southern Kwakiutl of

\$54 in 1903 and increasing to \$244 in 1921 (1950: 43). Since a single blanket was worth fifty cents and a double blanket was valued at three times that amount (Boas 1966: 78), the shaman who received the rate of ten blankets might average the equivalent of from five to fifteen dollars for his services in a curing ritual. If a shaman practiced perhaps four times each year and was paid a rate of ten blankets each time, the monetary equivalent would be from \$20 to \$60 annually.

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## APPENDIX A

## PLANT AND ANIMAL MATERIALS USED FOR REMEDIES

The following table seeks to show, on the basis of available information, which organic materials were used and how the remedies made from them were prepared and administered. When the sex and approximate age of the patient, the sex and age of the "curer" who administers the remedy, and the kinship relationship of the patient and curer has been recorded, this information has been added.

The information on plant materials has been drawn exclusively from the work of Turner and Bell (1973: 257-310). The source for the data on animal materials has been noted after each remedy.

The remedies in the table are not an exhaustive list of all remedies the Southern Kwakiutl probably had available to them, but they serve to illustrate the sorts of remedies that could be used.

TABLE I  
REMEDIES

<u>Abies grandis</u> [(Dougl.) Lindl.] (Grand Fir, Balsam Fir)
Water in which bark is boiled is used as a tonic.
Pitch boiled in water used as laxative, tonic and to treat coughs and T.B.
Pitch mixed with oulachen grease used as an unguent for sores and boils or rubbed on chest to treat T.B.
Heated pitch combined with catfish [sculpin?] oil and taken to treat constipation.
Piece of root put into mouth to treat gum boils and cankers.
<u>Acer macrophyllum</u> [Pursh] (Broad-Leaf Maple)
Hair tonic made from gum of spring buds combined with oil.

Achillea millefolium [L.] (Yarrow)

Leaves mixed with Fucus and tobacco for use in steam bath to treat rheumatism or general illness.

Leaves chewed or soaked in water and heated and applied to swellings or sores.

Mixed with Lonicera involucrata and placed on chest as a poultice for colds or hardened breasts following childbirth.

Allium cernuum [Roth] (Nodding Onion)

Poultice applied to sores and swellings made from bulbs soaked in hot water.

Alnus rubra [Bong.] (Red Alder)

Four pieces of bark sucked by a woman patient to treat the spitting of blood caused by T.B.

Boiling water poured over the bark was taken internally for T. B. and asthma or applied to skin to treat sores and eczema.

Sores and aches treated with a poultice made of a mixture of Fucus, Lonicera involucrata bark, tobacco, and bark.

Anaphalis margaritacea [(L.) B. & H.] (Pearly Everlasting)

Poultice for sores and swellings made from the dried plant mixed with the pitch of yellow cedar.

Plant boiled in water and consumed to treat internal disorders.

Aralia nudicaulis [L.] (Sarsaparilla)

Root was roasted, its bark removed, and the root broken up, mixed with oulachen grease and consumed to treat coughs and the spitting of blood.

Aruncus sylvester [Kostel.] (Goat's Beard)

Root was dried, soaked, scraped, and placed in mouth to treat coughs.

Blechnum spicant [(L.) With.] (Deer Fern)

Inner part of root eaten or root sucked and the saliva swallowed to treat diarrhoea.

Chamaecyparis nootkatensis [(D. Don) Spach] (Yellow Cedar)

For a woman's swollen kidney, her husband applied a mixture of boiled yellow cedar leaves and spruce bark.

Extract made from tips of four branches taken for general illness or used to wash sores and swellings.

Boughs rubbed on sores and swellings until the skin bled and then tobacco or yarrow were applied.

Poultice for sores made from chewed leaves.

Used for sweat baths to treat arthritis and rheumatism. Ashes of burned cedar bark blanket mixed with catfish [sculpin?] oil and rubbed on an ill patient to give him strength. Then a mat was placed over him and hit with four burning spruce boughs.

Cicuta douglasii [(DC.) Coult. & Rose] (Water Hemlock)

Pulverized root mixed with water, steamed, peeled, ground into powder, mixed with catfish [sculpin?] oil and taken to treat serious illness.

Vomiting induced by taking an extract of roots mixed with oulachen grease.

Purgative made by dipping roots in water in which hellebore roots had been rubbed and applying them to the stomach.

Roots used to make a poultice for drawing out splinters and thorns.

Cirsium spp. (Thistles)

Outer part of root was dried and put in the mouth to treat cankers and sores.

Conioselinum pacificum [(Wats.) Coult. & Rose]

Layers of Fucus, Conioselinum leaves and yellow cedar tips laid on heated stones of a sweat bath and salt water was poured on. The patient, covered with a blanket, lay on the cedar tips, He was rubbed with four pieces of yellow cedar bark after the steam bath and the pieces were placed under the trees the tips had come from. It was believed that the general weakness of the patient owing to disease would dry up with the bark.

Conocephalum conicum (A liverwort)

Placed in the mouth to treat rashes and cankers.

Crataegus douglasii [Lindl.] (Black Hawthorn)

Poultice for swellings made from chewed leaves.

Drosera rotundifolia [L.] (Sundew)

Used for removal of corns, warts, and bunions.

Echinodontium tinctorium [Ell. & Everh.] (A fungus)

Mixed with hemlock gum and applied to the skin to prevent sunburn.

Epilobium angustifolium [L.] (Fireweed)

Mixture of woolly pappus of fireweed seed, eagle down, and catfish [sculpin?] oil applied to incisions made for tumors.

Equisetum arvense [L.] (Horsetail)

Used to make poultices for cuts and sores.

Equisetum telmateia [Ehrh.] (Horsetail)

Used to make poultices for cuts and sores.

Fucus gardneri [Silva] (Sea Wrack)

Used as a poultice on sore areas of the body.

Mixed with tobacco, alder bark, and the bark, berries or leaves of Lonicera involucrata and the heated mixture used as a compress on sore areas.

Rubbed on sores or itchy scabs of children and then covered with catfish [sculpin?] oil and burnt red ochre.

Rubbed on legs or feet of a patient with locomotor ataxia.

Used to surround the hot rocks to create steam in a sweat bath to treat general sickness or rheumatism.

Fuligo (Slime mold)

Put on boils and swellings to help them come to a head.

Galium triflorum [Michx.] (Sweet-scented Bedstraw)

Rubbed on the skin, sometimes to the point of causing bleeding, and hellebore roots then applied to treat chest pains.

## Grass species

Flower stalks of many grasses were prepared with water to make an eyewash for the prevention of cataracts or for clearing opaque pupils.

Heracleum lanatum [Michx.] (Cow Parsnip, Indian Celery)

Roots used to scent ratfish oil for use as a hair ointment. This ointment was used by a girl during the puberty rite to rub on her face and waist.

Heuchera micrantha [Dougl. ex Lindl.] (Alumroot)

Probably had a medicinal use but the details are not known.

Juniperus communis [L.] (Creeping Juniper)

A mixture for treating diarrhoea was made of the berries boiled with hemlock bark, deer fern roots, and licorice fern.

Wood and bark boiled to extract the gum which was then taken for shortness of breath and to purify the blood.

Kalmia polifolia [Wang.] (Swamp Laurel)

Water in which the leaves were boiled was taken to ease the spitting of blood. The water was also used to bathe sores and cuts which were slow to heal.

(The leaves contain the toxic drug andromedin.)

Lomatium nudicaule [(Pursh) Coult. & Rose] (Indian  
Consumption Plant)

- Chewed leaves applied to carbuncles and covered with a warm skunk cabbage leaf by a man's wife.
- Chewed seeds applied to the head by a child to ease his father's headache.
- Chewed seeds applied to treat stomach and back aches, swollen breasts, an aching body, colds, swollen feet and knees.
- Seeds eaten to treat constipation.
- Seeds sucked to treat a cough or sore throat.
- Used in a sweat bath with Lonicera involucrata and tobacco to treat general sickness.
- Seeds steeped in water and the fluid taken by an expectant woman to insure an easy labour at birth.

Lonicera involucrata [(Rich.) Banks ex Spreng.] (Black  
Twinberry)

- Boiled leaves or roots applied to swollen feet or shoulders.
- Chewed leaves applied to sores.
- Boiled bark or leaves mixed with yarrow leaves and applied to the breasts of a woman after delivery of a child to help the milk flow.
- Bark, berries, and leaves mixed with Fucus or Ulva, alder bark or tobacco and applied on sores and swellings.
- Bark, berries, and leaves used with oulachen grease and hot water as a poultice.
- Mixture of bark, yellow cedar tips, elderberry bark, and salt water used to soak sore feet and legs.

Lysichitum americanum [Hulten & St. John] (Skunk Cabbage)

- Heated leaves and roots applied to sores, boils, and carbuncles.
- Leaves used in a sweat bath with Fucus, yellow cedar tips, and hellebore.
- Heated leaves used to draw out thorns and splinters.
- Steamed, mashed roots used as a poultice for swellings. The poultice was held in place with skunk cabbage leaves and cherry bark glued with pitch. The poultice was left in place until the swelling broke.
- Mashed root rubbed on a child's head to help his hair grow.

Menyanthes trifoliata [L.] (Marsh Buckbean)

- Extract of boiled roots or leaves taken by anyone who felt sick to the stomach.
- Ground, boiled stem and roots taken thrice daily for the spitting of blood.

Menziesia ferruginea [Smith] (False Azalea)

Heated leaves used to poultice sores and swellings.  
 Women chew the leaves to relieve pains in the heart  
 and stomach troubles.

Moneses uniflora [Gray] (Single Delight, One-flowered  
Pyrola)

Pulverized plant applied to the skin to cause blistering of swollen, painful areas. The blisters were opened and catfish [sculpin?] oil was applied. When the skin peeled, the area was bathed with an extract of gooseberry roots and bandaged with plantain leaves.

Nereocystis luetkeana [(Mertens) Postels & Ruprecht] (Common Kelp)

Heated, damp kelp was placed on the back and stomach of a pregnant woman in hopes that the child would be as slippery as kelp during the delivery.

Long leaves rubbed on burns, scabs, non-pigmented areas, and swollen feet.

To stop heavy bleeding a pebble would be placed on an artery and kelp used as a tourniquet.

The growth of a child's hair was encouraged by rubbing the powder of dry kelp on the scalp.

Nicotiana sp. (Tobacco)

(Not native to the area)

Whole leaves used in sweat baths and for poultices for sores, wounds, and swellings.

Leaves frequently crushed and mixed with other common medicinal plants (eg. Fucus, yarrow, alder, Lonicera involucrata, etc.).

Nuphar polysepalum [Engelm. ex Clint.] (Yellow Pond Lily)

Rhizomes were covered with hot ash to be used as medicine for swellings in the body or sicknesses in the bones of men.

Extract of ground rhizomes taken for asthma and chest pains.

Heated leaves placed on chest to treat chest pains.

Oenanthe Sarmientosa [Presl. ex DC.] (Water Parsley)

Roots and seeds taken as an emetic.

Oplopanax Horridum [Miq.] (Devil's Club)

Four pieces of root sucked and saliva swallowed to treat stomach pains and constipation.

Extract of the bark taken for T. B..

Burnt, rotten stems mixed with catfish [sculpin?] oil and applied to swellings.

Bark used as part of the fluid used to steam a patient with pains in his body in a sweat bath.

(Thought, like hellebore, to have great magical and

medicinal powers.)

Osmaronia cerasiformis [(T. & G.) Greene] (Indian Plum, Bird Cherry)

Possibly chewed or burned and mixed with catfish [sculpin?] oil and applied to sore areas.

Osmorhiza chilensis [H. & A.] (Sweet Cicely)

Seeds and roots may have been used as an emetic.

Picea sitchensis [(Bong.) Carr] (Sitka Spruce)

Bark of root used to treat kidney swellings.

Roots used in medicine for diarrhoea.

Extract from buds used for coughs and colds.

Pitch used as a poultice for swellings, wounds, boils, abrasions and as an adhesive for cedar bark dressings.

Headache treated by striking patient on the head with four branches until he bled.

Pinus contorta [Dougl. ex Loud.] (Lodgepole Pine, Jack Pine)

Boiled buds and pitch taken to treat stomach ache and coughs.

Pine smoke was thought to be harmful to a sick person.

Pinus monticola [Dougl. ex D. Don] (Western White Pine)

Pitch used for stomach aches, coughs, and sores.

Gum chewed by women to aid fertility.

Physocarpus capitatus [(Pursh) Kuntze] (Ninebark)

Extract from roots used as a purgative, especially to treat locomotor ataxia.

Boiled bark taken for constipation.

Plantago major [L.] (Broad-leaved Plantain)

Leaves used to heal skin after Moneses uniflora was used to induce blistering on sores and swellings.

Polypodium glycyrrhiza [DC. Eat.] (Licorice Fern)

Roots sucked and saliva swallowed to stop the vomiting of blood.

Roots used in medicine for diarrhoea.

Populus trichocarpa [T. & G. ex Hook.] (Black Cottonwood)

Buds mixed with ratfish oil for use as a hair tonic or to prevent sunburn.

Porphyra spp. (Red Laver)

Considered to be an aid to good health and eaten as a food for its laxative effect.

Potentilla pacifica [Howell] (Cinquefoil, Silverweed)

Boiled roots mixed with catfish [sculpin?] oil and

applied to sores and swellings.  
 Roots squeezed and the juice used as an eyewash for eye inflammations.

Prunus emarginata [(Dougl.) Walpers] (Bitter Cherry, Wild Cherry)

Bark used as a dressing for wounds.  
 Grated roots placed in the mouth to treat cankers.  
 Grated roots applied to a woman's nipples to encourage her child to nurse.  
 Ashes of the bark spread on the chest of a newborn child to protect against rashes and mouth sores.  
 Extract of bark taken for T. B., eczema, or heart trouble.  
 Roots cut up, steeped in hot water, and the extract taken for discharge of blood.

Pseudotsuga menziesii [(Mirb.) Franco] (Douglas Fir)

Crushed burned bark mixed with grated Cicuta douglasii in water and taken for diarrhoea.  
 Bark mixed with perch oil and eagle down and applied to a carbuncle for three days before an incision was made in the carbuncle. The treatment was done by a man's brother.  
 Pitch also had medicinal properties but the details are not recorded.

Pyrus fusca [Raf.] (Wild Crabapple)

Eczema areas wiped with four cloths and the cloths placed in the cracks in a crabapple tree.  
 When a woman spat blood, some of her saliva would be sealed in a crack in a crabapple tree.

Rhamnus purshiana [DC.] (Cascara)

Bark soaked in boiling water and the fluid taken as a laxative or for biliousness.  
 (The bark is the source of the drug cascacin.)

Ribes lobbbii [Gray] (Sticky Gooseberry)

Burned, pulverized root mixed with perch oil and applied to boils.  
 Roots grated in salt water and applied to skin and mouth sores, blisters, and carbuncles.  
 Roots used in medicine for diarrhoea.

Rubus parviflorus [Nutt.] (Thimbleberry)

Boiled leaves mixed with roots and vines of blackberry and taken for spitting of blood and vomiting.  
 Dried, powdered leaves used on wounds to speed healing and eaten for internal disorders.  
 Leaves used as a menstrual napkin for women with lengthy periods in the belief that it would shorten the length of the period.

Rubus spectabilis [Pursh] (Salmonberry)

Chewed salmonberry sprouts applied to a child's head by the mother to encourage growth.

Powdered bark applied to sores and burns.

Rubus ursinus [Cham. & Schlecht.] (Trailing Blackberry)

Vines and roots mixed with boiled thimbleberry leaves and taken for spitting of blood and vomiting.

Vines used in medicine for diarrhoea.

Rumex occidentalis [Wats.] (Western Dock)

Extract of pulverized roots used to bathe swellings and sores.

A woman's husband boiled four roots which she ate while strained roots were placed on her stomach to ease a stomach ache.

Sambucus racemosa [L.] (Red Elderberry)

Grated roots in water taken by a woman who felt ill to induce vomiting.

Bark mixed with yellow cedar bark and Lonicera involucrata in water to soak sore feet and legs.

Bark used in the sweat bath taken by a woman for relaxation following childbirth.

Scirpus americanus [Pers.] (Bulrush, Tule)

Probably dipped in oil and rubbed on a child's head to encourage the growth of hair.

Symphoricarpos albus [(L.) Blake] (Waxberry, Snowberry)

Burnt berries mixed with catfish [sculpin?] oil and applied to inflamed eyes.

Tips of branches lit and used to cauterize.

Thuja plicata [Donn.] (Western Red Cedar)

Mixture of leaves and hellebore roots applied to a sore back.

Four pieces of inner bark, four fingers in width, used to cover carbuncles.

Shredded bark used to cauterize swellings and sores.

Twigs broken in front of each eye and thrown away to help sties disappear.

Tsuga heterophylla [(Raf.) Sarg.] (Western Hemlock)

Wet, crushed bark applied to women's sores and burns.

Chewed needles applied to burns and covered with shredded yellow cedar bark.

Boughs from young trees growing out of stumps put in warm water and used to bathe eyes.

Sap rubbed on top lids of eyes to treat inflammation.

Bark used in medicine for diarrhoea.

Twigs lit and used for cauterizing moles and warts.

Pregnant women prayed to tips of four hemlock trees and

washed with hemlock daily to insure an easy delivery.

Ulva lactuca [L.] (Sea lettuce)

Mixed with bark of Lonicera involucrata in hot water to make a poultice for women with colds or to put on sore, hard breasts of a woman with a new baby.

Urtica dioica [L. var. lyallii (Wats.)] (Stinging Nettle)

Juice from pounded roots taken to induce labour in a pregnant woman.

Juice of roots rubbed on head to prevent loss of hair.

Fiber lit and used to cauterize skin to help ailments leave the body.

Nettles scraped on chest and hellebore applied to treat chest pains.

Locomotor ataxia treated by cutting soles of feet and rubbing them with nettles and hellebore roots.

Vaccinium parvifolium [Smith] (Red Huckleberry)

Eating of berries by a girl at puberty could cause loss of teeth.

Veratrum viride [Ait.] (Indian Hellebore, Green Hellebore, False Hellebore)

Four pieces of root placed in the mouth as a laxative.

Ground roots in cold water taken to induce vomiting.

Back rubbed raw with cedar boughs and a mixture of crushed roots and perch oil applied to treat back pains.

Nettles or bedstraw rubbed on chest and roots or leaves applied to treat chest pains.

Grated roots used as a poultice on swellings.

Grated roots added to water and rubbed in hair to treat dandruff.

Powdered leaves snuffed to treat a cold.

(Hellebore was believed to have the power to keep away disease-causing spirits. The plant contains poisonous alkaloids.)

Bear

Gall used to treat rheumatism (Curtis 1915: 97).

Mixture of dried bile and water taken for asthma, blood spitting, and vomiting (Boas 1966: 380).

Fish oils

Used as a base for several medicines which are rubbed on the patient or taken internally (Boas 1966: 377).

Herring spawn

Burnt spawn mixed with catfish [sculpin?] oil and rubbed on chest and back to bring out a measles

rash (Boas 1966: 387).

Holothuria (Sea Cucumber)

Top is cut off and the water in it taken for the sudden vomiting of blood (Boas 1966: 380).

Human skeleton bones

Used as an instrument to cut flesh (Boas 1966: 387).  
Powdered and rubbed on the skin to treat locomotor ataxia (Boas 1966: 387).

Jackdaw [Crow?] or raven gall

Poured into the eyes to treat cataracts (Boas 1966: 385).

Mouth parts of small barnacles

Powdered, mixed with water, and taken to bring out a measles rash (Boas 1966: 387).

Ochre (a mineral)

Mixed with catfish [sculpin?] oil and applied to a measles rash (Boas 1966: 387).

Sea worm's shell

Ground, put in water, and used as an eyewash to prevent cataracts (Boas 1966: 384-385).

Seal blubber

Applied to very bad burns (Boas 1966: 383).

Sediment of chamber pot [urine box?]

Rubbed on top eyelids to treat inflammation (Boas 1966: 385).

Smearred near the ear to treat a swelling in the ear (Boas 1966: 385).

(It was believed that keeping the chamber pot near the door of the house helped ward off illnesses (Boas 1966: 377).)

Shell

When tumors are cut out, pulverized shell and sandstone may be put into the incision to help dry it out (Boas 1966: 383).

Skate's liver

Applied to very severe burns (Boas 1966: 383).  
Rubbed on a measles rash (Boas 1966: 387).

Snail

Powdered snail mixed with catfish [sculpin?] oil and applied to the eyelid to counteract blindness (Boas 1966: 385).

Four snails encased in moss were held in the throat to

ease a sore throat caused by tonsillitis or diphtheria (Boas 1966: 387-388).  
Disemboweled snails applied to cuts (Boas 1966: 388).

#### Spider's webs

Put on wounds to staunch bleeding (Boas 1966: 384).

#### Squid's skin

Put on the stump of an amputated finger to stop the bleeding (Boas 1966: 384).

#### Urine

Urine, sea water, and boiled and peeled devil's club stems used to create the steam in a sweat bath (Boas 1966: 377).

Face washed in it to keep eyesight keen (Boas 1966: 385).

Heated to steam ear before the ear is cleaned to treat deafness (Boas 1966: 385).

Patient bathes in it to treat locomotor ataxia (Boas 1966: 386-387).

## APPENDIX B

## POPULATION AND HEALTH

The following table is based on one drawn up by Codere (1950: 52) using her sources and has been included here to show the effects of illness on the Southern Kwakiutl population in terms of the Europeans' classification of diseases. Particular diseases that were known to have been present among the people in a particular year have been recorded.

TABLE II

## KWAKIUTL POPULATION

YEAR	POPULATION	DISEASES
Pre-contact	17,300	
1836-41	23,586	
1837		Smallpox
1853	7,000 approx.	
1872	3,500	
1876		Smallpox
1877	3,000	Smallpox
1880	2,500	
1881		Measles, V.D., T.B.
1882	2,264	Measles, V.D.
1883	2,264	Measles
1884	1,889	
1885	1,969	
1887		V.D.
1889	1,898	V.D.
1890	1,797	Influenza
1891	1,732	Influenza
1892	1,678	Influenza
1896	1,639	
1897	1,605	
1898	1,597	
1903	1,345	T.B., Pneumonia, Bronchitis
1904	1,317	
1905	1,278	
1906	1,257	
1907	1,305	
1908	1,294	Measles
1909	1,263	
1910	1,238	
1911	1,208	
1912	1,199	

YEAR	POPULATION	DISEASES
1913	1,183	
1914	1,183	
1917	1,134	
1924	1,039	T.B.
1928	1,088	
1934	1,173	

The population figures drop off sharply until 1924 due to diseases that either resulted in deaths or in decreased fertility: smallpox, tuberculosis, measles, influenza, pneumonia, whooping cough, bronchitis, and venereal diseases. The impact of these diseases resulted in both continual losses of population and a reduction in a healthy capacity to replace the losses with new births.

Between 1924 and 1928 the population decline was halted as a result of better medical services for the native population, vaccinations undertaken to combat smallpox, and perhaps the development of greater resistance to the diseases among the population. As the early boom towns of the Europeans became more stable communities with a more settled population and better public health and sanitation, the general health of the white and Indian inhabitants may have improved and the prostitution into which many native women had been drawn probably decreased (Codere 1950: 49-61).

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SOUTHERN KWAKIUTL MEDICINE

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