

Shamans and Seal Oil: Health and Healing in Traditional Alaska Native Societies



Robert Fortune, MD, MPH
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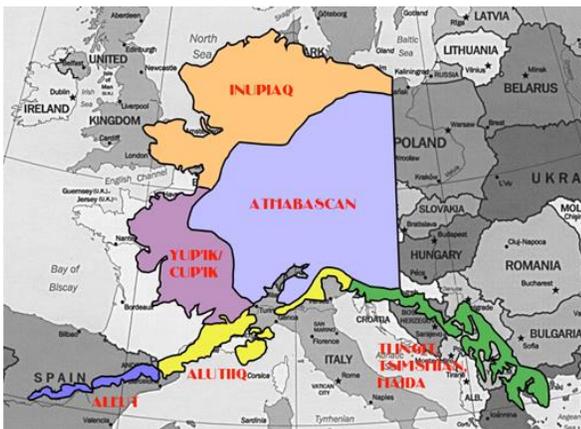
Comments on Manuscript by Robert Fortune on “Alaska Native Traditional Healing” 114

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 Back cover image from Dr. Fortune’s personal collection.

Foreword

Robert Fortune, MD, MPH, was a role model, mentor, teacher, and friend. He articulated his thoughts as well as his wealth of knowledge gleaned by intense and active study, through numerous publications. In the early-1980s Robert was actively documenting the history of indigenous traditional healing practices. During the 1984 International Congress on Circumpolar Health there was a special session on Alaska Native traditional healing that featured the renowned Inupiaq Tribal Doctor Della Keats. I was a co-host of that session. Robert introduced me to two Canadian researchers who were studying “sensed presence” and what might be taking place during times of “cabin fever” or “arctic hysteria.” That introduction fueled my burgeoning interest in documenting and understanding indigenous traditional healing.

A few years later Robert asked if I would review a draft manuscript that he was preparing on Alaska Native traditional healing. He was aware of my investigations and work with the Inupiaq on this topic. I chose one area of the state because of the cultural differences and complexities of covering such large



territories. This map puts into comparison the cultural groups reviewed in this paper on scale with the nations of Europe. Clearly the traditional cultural practices of Greece were different than the Danes or the English. So it was in Alaska. Undaunted Dr. Fortune prepared this manuscript to gather all of the sources available to him in the mid-1980s so that each of the six Alaskan indigenous groups would have comparable information on their traditional practices regarding well-being.

While drafting this document Dr. Fortune orchestrated a special session during the 1987 International Congress on Circumpolar Health that was held in Umea, Sweden. For it he prepared a paper on the traditional use of plants for healing throughout Alaska. This was expanded and later published as a monograph in *Alaska Medicine* in 1988. In 1989 he produced the book *Chills and fever: Health and disease in the early history of Alaska*. This book covers not only traditional empirical practices, but also the attributes of the newly introduced allopathic system as it moved into a frontier along with its own associated diseases and maladies. Throughout the 1980s Dr. Fortune documented extensively many aspects of health and well-being in Alaska.

There is a curious pattern of the discovery by non-indigenous peoples of the skills and knowledge of Alaska Natives. This pattern appears as the sources of information cited are considered in this and Dr. Fortune's other works. At first contact the cultural practices were recorded. Then there was a concerted effort to eliminate these old ways and a desire to shift the needs for health, education, and welfare to the thoughts and behaviors of the new-comers of the 19th century. By mid-20th century there was a desire to gather the information from the remaining elders who had been raised with the old stories and who survived the massive epidemics and hardships of attempted acculturation. With the lightweight recording devices of the 1970s and 80s there was a renewed effort to again collect stories and knowledge from the elders. It was a time also for others, like Robert Fortune, to dig into the vast amount of previously documented materials.

By looking at the initial observations, the continuing behaviors, the retained knowledge and skills, and the renewed application of traditional techniques in the later decades of the 20th century, we in the 21st century may benefit. We can now look at these traditional practices and begin to understand what may have been taking place. Recent efforts to identify the antibacterial properties of traditionally used poultices are providing indications that there were beneficial aspects to the practice. As Dr. Fortune states in his Conclusion the patient's belief in her or his healer is now known to provide benefit. Research at the turn of the century is now confirming that mind-body medicine is much more pervasive and effective than previously documented. The ancient ways of engaging the patient, family, friends, and the belief of assistance from a spiritual source in concert with a renewal to cultural behaviors and locally provided traditional healing attributes from the earth, all contributed to enhanced health and improved well-being.

My recommendation to you as the reader is to finish this editor's preface, then read the Preface by Dr. Fortune. Then review his Introduction to gain a foundation for where he was coming from as he initiated and assessed this work. Then go right to his Conclusion in Chapter 7. His summary ties together many aspects of each of the chapters and offers creative ways to consider what is presented. My sense is that this orientation, now 25 years after it was written, better prepares the reader for the specifics that are provided in each of the six regionally and culturally-based chapters.

The Conclusion of this book begins with the following questions.

- What is the value today of traditional ideas of health and healing?
- Is it worth the effort to study, when virtually none of its content seems relevant in a world of high-technology medicine?
- Are these quaint traditions merely an exercise in antiquarianism?

Dr. Fortuine answers these questions and provides the challenge to each reader to study these documented practices and learn from them to enhance the ability to provide health services and improve well-being throughout the remote area of Alaska and the world.

Dr. Robert Alan Fortuine: March 10, 1934 – May 11, 2009

Carl M. Hild, PhD, MS

Preface

This book had its origins in 1983, when I was asked to speak on an historical topic at the annual meeting of the Alaska State Medical Association at Cordova. The topic I chose was traditional surgery, and the paper was later published in a considerably expanded form (Fortuine, 1985). In seeking source materials on surgery, I was struck by the amount of information on other Alaskan traditional health and healing practices, yet virtually none of it was available in an easily accessible form. Not that isolated studies of considerable value had not been done, especially by Margaret Lantis (1959), Theodore Bank II (1953), and Gordon H. Marsh and William S. Laughlin (1956), to name only a few. For the most part, however, previous work in this area has been limited in scope to a singular geographical group or to a specific health practice. A comparative study of traditional medicine of the Alaska Natives apparently does not exist.

I have attempted here to present a summary description of health and healing practices among the six principle Alaska Native cultural groups (Krauss, 1982). As a physician, I freely acknowledge not only my own lack of formal training in anthropology and history, but also my considerable debt to those who are proficient in these areas. My work is written from a medio-historical perspective and is based largely on source materials from the late eighteenth and the nineteenth centuries. I have had neither the financial resources nor the time away from my professional duties to conduct systematic interviews among contemporary carriers of the cultures. Such work is full of pitfalls, in any event, and requires training and skills in the social sciences which I do not possess.

Despite these caveats, however, I hope this study will have interest and even value for health workers, anthropologists, historians, and for the Alaska Native people themselves. It will afford at least a glimpse of the role that health and healing have played in the rich aboriginal cultures of Alaska; traditions that are blurred today and perhaps even to a large extent forgotten. At the very least, I hope that the book will point the way toward a much more comprehensive treatment by others of this important aspect of ethnohistory.

I am grateful to all those who have assisted me in this enjoyable task, especially members of my own family. My son Alex helped with the storage and retrieval of the data base, my daughter Willa Ryan entered the original holograph on to a word processor. My wife Sheila, as always, has warmly encouraged and supported my efforts.

R. F.

Anchorage, Alaska

October 1986

Introduction

Traditional Healing: General Considerations

The health and healing practices of mankind have their origins deep in prehistory. The earliest techniques were probably instinctive, or possibly based on observation of what animals do when they are sick or injured. For example, it is natural, and rational, to rest when sick, to splint an injured limb, lick a painful wound, or chase a parasite on the skin. Normally carnivorous animals, such as dogs, are known to eat grasses and other plants when they are ill. Humans, of course, not only had the intelligence but also the manual dexterity to improve on these techniques. They could extract a splinter or an arrow from the skin, apply pressure to a bleeding wound, open an abscess, and even suture the edges of a cut with sinew or hair. For internal disorders it was found helpful to rub a painful area or, probably at a later stage, to open a vein to relieve congestion or pressure. Nor did all healing techniques involve dexterity. Heat must have been found at an early stage to relieve the pains of arthritis or an abscess, just as cold counteracted a fever. Ultimately, by a process of trial and error, humans learned the use of plant and animal substances for healing.

Some practices and beliefs were concerned with the health of the individual or community without involving healing in any literal sense. Women have obviously become pregnant, gone into labor, and delivered infants since the dawn of mankind's sojourn on earth. They have fed their offspring and otherwise nurtured them through childhood and puberty to prepare them for the trials of adolescence. The children, for their part, have felt the first stirrings of sexual maturity, each in his or her way. This critical period of life in many cultures was associated with various *rites of passage*, which prepared adolescents for their adult role. Facial and body ornamentation was often a conspicuous feature of these ceremonies and frequently involved surgical procedures such as tattooing, or the perforation of the lips, nose, or ear lobes. Later, as members of the community aged, their place in society changed and they had to face new relationships and attitudes. Death itself, despite its inevitability, could be viewed from strikingly different perspectives in various cultures.

Each of these stages of life has important implications for health. Pregnancy is a dangerous time for women with certain risk factors. Labor may be obstructed, or fatal hemorrhage may occur following delivery. The infant faces a hostile and uncertain world, especially during the first year of life, when low birth weight, congenital abnormalities, or infections may contribute to an early demise. At maturity, and indeed throughout her reproductive years, a girl's menses may be subject to aberration. The surgical procedures for ornamentation and other ritual purposes may result in infection, excessive bleeding, or unwanted scarring. Death of an individual may occur prematurely if economic considerations demand it, or if, as in a few cultures, human sacrifice is practiced.

It was inevitable that some individuals in the community became more proficient than others in the skills of healing. Such persons gained a reputation for their special knowledge and abilities, and were consulted when simple home remedies did not suffice. Healers of this kind were not infrequently older women, who thus gained a measure of

special respect in the community. Their ministrations were based largely on simple reason, but they also represented the latest stage of a growing tradition of healing passed on through the generations.

Empirical healing is thus a common heritage of mankind and in fact still underlies much of modern medicine, especially internal medicine, obstetrics, orthopedics, and surgery. At an early stage of cultural development, however, it was limited in its application to the health hazards of everyday life, the causes of which were readily apparent. Everyone is subject to colds, skin rashes, parasites, and diarrhea on occasion, not to mention cuts, fractures, and burns. Likewise, women will continue to have problems associated with childbirth and menstruation. It was against such common plagues of mankind that empirical healing was directed.

Not all threats to health, however, were so readily explained, or treated. How does one account, for example, for sudden stabbing pains, a wasting disease, paralysis, seizures, or a major mental aberration? Why is one person stricken in an epidemic and the neighbor not? Why do some sick recover and others go on to die? None of these phenomena had an apparent or rational cause, at least in ordinary daily experience. Throughout the ages, and in many societies still today, man has tried to explain these mysteries of health and disease through religion or magic.

In an effort to explain the inexplicable, people have had recourse to speculations on the nature of disease itself. In a remarkable example of cultural convergence, similar explanations of sickness have developed in totally disparate societies around the world, differing only in unimportant details (Garrison, 1929, p. 18). In general terms, a disease was thought to be caused either by something foreign added to the body, or by something essential taken from it. Our modern notions of infectious disease or vitamin deficiencies have an obvious parallel to these universal ideas.

The concept of object intrusion was particularly widespread, postulating that a foreign body or other object was made to enter the body and thereby cause disease. The object might be recognizable, such as a dart, but more commonly it was a magical force directed at the victim by a sorcerer or enemy. Object intrusion was felt to account for sudden severe pains, such as those of pleurisy, gout, or a migraine headache. The goal of the healer was to remove the offending object by magical means.

Soul loss was another common explanation for certain kinds of illness, notably those characterized by loss or impairment of consciousness. It was widely believed that every individual had a spiritual essence known as a soul, which could wander away on its own, such as during dreams, or could be captured or stolen by an enemy. The healer's task was to recognize what had happened, search for the lost soul, bring it back, and restore it to the victim. A third type of illness was thought to be caused by possession by a demon, or evil spirit. A malignant spirit supposedly entered a person's body and mind, displacing or overwhelming the patient's own soul. The victim then became subject to seizures, hallucinations, mania, and other types of abnormal behavior. The healer's task in this

type of sickness was exorcism, or the use of magical formulas such as charms or incantations, to drive out the offending spirit.

A fourth type of disease was thought to be due to sympathetic magic. One well-known example of this was the pain caused in the victim by the abuse of a doll, picture, or other likeness. A special form of sympathetic magic was called contagious magic, practiced on hair, nail clippings, spittle, or other substances derived from the body of the victim. It is interesting to note in passing that the fear of contagious magic probably contributed to the sanitary disposal of human waste in many societies (Sigerist, 1951, p. 133-134).

The role of the sorcerer must also be mentioned as a presumed cause of illness. The sorcerer was an individual who had the power to work harm in a victim by the manipulation of evil forces. Among the techniques were those already mentioned, such as object intrusion or the practice of sympathetic magic. The task of the healer was to identify the sorcerer, sometimes by magical means, and then find a way to counteract the evil forces which had been brought into play.

A final cause of illness was believed to be the breach of prescribed behavior. Over the generations most societies have developed an array of rules, known as taboos, which regulated daily life. Some were rational, but more often they were based on magical or religious considerations, and their origin was obscure. The prescribed taboos were complex, and the individual who knowingly or unknowingly broke them risked the disfavor of the divine powers, and could as a result become ill, or even die. The healer's task here was to find out just which rule had been broken and then determine how the victim could make the appropriate amends.

The individual who had the ability to heal diseases due to these supernatural and mysterious forces was the shaman, a term which originally applied to the healers of eastern

Siberia, but now is used in a more general sense. The shaman was a person with special powers derived from his ability to consort with spirits. Although healing was an essential function, he or she had others at least as important, such as general prophecy, manipulation of the weather, and predictions about the success of the hunt. The shaman was also a kind of priest of the local religion and a repository for cultural lore such as myths, legends, chants, and dances. The shaman was involved in the welfare of the entire community and hence was far more than simply the ancestor of the modern physician (Sigerist, 1951, p.161).

The shaman came to her or his dominant role by-a variety of means. In some cultures the shaman might be selected because of unusual strength, manifest wisdom, or prowess as a hunter; in others someone was chosen because of some physical or mental aberration, which made her or him stand out from others in a totally different way. In every case, however, the shaman was evidently different from her or his compatriots. The shaman might be addicted to solitary wanderings or subject to trance-like states. Possibly a village elder had seen the person in a dream; perhaps an older shaman had recognized in the person the necessary qualities and had taken her or him on

as an apprentice (Robinson, 1931, p. 3-4). The course of study was often very long and complex, involving a rigorous attention to the details of learning songs, chants, dances, and magic formulas. Certain special skills were also essential, such as sleight-of-hand and ventriloquism.

Unlike the modern physician, the shaman almost never treated symptoms as such, but rather in various ways determined the nature of the illness and then attacked the specific cause as it was understood. If an individual became sick under mysterious circumstances, the shaman's task was to find the cause, such as object intrusion, soul loss, or sorcery. The shaman then administered appropriate treatment by drumming, chanting, dancing, the use of masks, or other means. Sometimes the shaman would seem to suck out an intruded object; in others he or she would go into a deep trance while searching the world to recover a lost soul. Many techniques involved legerdemain, the effect heightened by semi-darkness and a flickering fire.

Besides the treatment of specific illnesses, the shaman also engaged in a kind of magical preventive medicine, using amulets, talismans, and charms. An amulet was a physical object, such as a smooth stone or even a piece of a dead body, which the shaman gave clients to carry to ward off evil, particularly the malignant forces of sorcery. A talisman was also an object, often with mysterious writing on it, but this time one which brought its bearer good luck, much as a four-leaf clover is supposed to do. A charm consisted of spoken magic, such as a prayer, an incantation, exorcism, or simply a bit of gibberish (Garrison, 1929, p. 40-42). The shaman was also the local expert on taboos and the multitudinous rules of life which, when broken, could result in illness.

The shaman, besides the magical stock-in-trade, sometimes also used empirical methods of healing, such as plants, massage, or surgery. These he or she generally invested with a magical dimension, which no doubt increased their effectiveness in the eyes of the clients. In fact, certain surgical procedures, including venesection, scarification, and in some cultures trepanation of the skull, were probably more ceremonial in nature than based on any real anatomical or physiological principles.

Because of the power over the lives of people, the shaman was respected and often greatly feared. He or she usually attained substantial wealth and standing, owning the largest house, the finest clothes, or the best hunting implements in the community. The shaman was paid in advance and services did not come cheap. Sometimes the shaman was known to play out a cure, insisting on payments at each stage. At other times, the shaman might accept gifts in return for the assurance of good health.

The life of such a healer was not always a happy one, however, since there were important risks associated with spiritual power. In many societies the shaman was not paid unless the cure was successful, and repeated failures led to a loss of standing in the community. More threatening, however, was the charge of sorcery, or black magic. If members of the community seriously suspected the shaman of intentionally bringing evil or misfortune, her or his practice might come to an abrupt end in a grisly fashion.

Traditional medicine has developed in a more or less parallel fashion in most pre-literate societies around the world. Both empirical and magical healing may also be clearly traced through ancient civilizations in the Middle East, Europe, and Asia. In some societies, such as that of Babylonia, the religious element was dominant; in others, such as classical Greece, the rational aspect prevailed. The latter approach ultimately became the foundation of our modern Western scientific medicine, although the empirical and religious dimensions remain very much alive today in what are generally called folk healing and faith healing.

Plan of the Book

The next six chapters of this monograph are devoted to a discussion, from the historical perspective, of the place of health and healing in traditional Alaska Native life. Each chapter follows a similar pattern, beginning with a necessary background on the geography, climate, vegetation, and animal life of the area, then moving on to a brief general account of the local Native culture. Following this introduction is a description of beliefs and practices relating to pregnancy, childbirth, infant and child care, maturation, old age, and death. The final portion of each chapter then deals with traditional medicine, including concepts of disease, the types and characteristics of healers, and indigenous methods of healing, both magico-religious and empirical.

The separate portrayal of the similar traditional approach to health of the six main Alaska Natives groups may strike some as repetitious. I have chosen this approach, however, not only for the sake of greater clarity, but primarily so that someone with a special interest in one or more cultures can easily retrieve a summary account of healing practices for that group.

The sources for this study are whenever possible the original narratives of explorers, traders, missionaries, government officials, and physicians, dating from the late eighteenth and the nineteenth centuries. The work of modern ethno historians and other anthropologists has been used to fill many gaps in the earlier written records. The result is necessarily an incomplete as well as imperfect picture. The nature of the evidence would also suggest that the result is sometimes inaccurate as well. Only a very few of the observers cited had any medical training or experience, and those that did, such as Steller, Merck, and Edmonds, were steeped in a medical tradition quite unlike that of the late twentieth century. Whatever their background, early writers usually had only a brief contact with the Natives, very few living as what we would today call a *participant observer*. Their knowledge of the local language was at best imperfect, and more likely was negligible. Observations on traditional medicine were particularly likely to have been misunderstood because of the close relationship between healing and religion. This is an area which was not discussed openly and freely, especially with an alien people whose own religious beliefs, to say the least, did not condone the Native practices. Modern writers have their own problems of interpretation. Although communication is likely to be better, many of the older beliefs and practices have doubtless been lost or at least modified with time or subtly influenced by Western practice. A final problem of interpretation is that many plants and other substances used for healing cannot be identified with certainty today.

Traditional healing is thus a topic which is difficult, perhaps even hazardous, to reconstruct from the fragmentary and uncertain evidence available. The attempt is worthwhile, however, because of the subject's importance to the history of some of a culture's earliest stirrings in science and religion, but even more because traditional healing portrays the universal wish of human beings, at all times and places, to be free from pain, disease, disability, and untimely death.

CHAPTER 1. THE ALEUTS

The Setting

The Aleutian Islands, home of the Aleuts, stretch for about 1,200 miles in a long arc from the Alaska Peninsula to within 500 miles of the mainland of Asia. They consist of peaks of volcanic mountains, several of them still very much alive today. The chain comprises about one hundred islands of one-half mile or more in size, distributed into five principal groups. The Near islands, so-called because they were nearest to Siberia, whence the first European explorers came, are a compact cluster, among which include Attu and Agattu. Moving eastward, the Rat Islands include Amchitka, the former underground nuclear test site, and Kiska, which was occupied by the Japanese in 1942-43. The Andreanof Islands stand approximately in the mid-portion of the chain, the largest being Adak, Atka, and Amlia. The Islands of the Four Mountains are the smallest group, the four major ones being relatively small rocky points of land to the west of the large island of Umnak. Finally, the longest and most important group is the Fox Islands, where most modern Aleuts live. Among the major islands in this archipelago are Umnak, Unalaska, Akutan, Akun, and Unimak. Between the latter two lies Unimak Pass, the major shipping route from the North Pacific to the Bering Sea.

The climate of the Aleutians is notorious for its violent storms, wind, fog, and precipitation. Permafrost is absent, as is ocean ice, except on the north side of the Alaska Peninsula. Temperatures remain relatively mild and constant throughout the year, ranging from a mean of 35 to 50 degrees Fahrenheit. Rain or snow falls over 200 days a year.

The islands are virtually treeless and mantled with a thick growth of grass, moss, and shrubs, giving them a rich green color during most of the year. The land is hilly or mountainous, with a rocky hostile shore which frowns its defiance to the breaking surf. Many active volcanoes stud the archipelago, and hot springs and earth tremors further attest to the unstable nature of the earth's crust in this region.

Marine life, in the form of plants, crustaceans, fish, birds, and mammals, has always been abundant in the Aleutians. Seaweed, clams, mussels, and crabs live in profusion near the shore, while edible fish, such as salmon, halibut, codfish, and flounder, abound in the offshore islands. Countless seabirds nest on the islands, some spending the whole year in the region. Sea mammals, however, were the form of wildlife which permitted human life to flourish in these stormy islands. Whales, sea lions, fur seals, and sea otters served not only as a basic food source, but also provided oil for light and heat, sinew for sewing, fur and gut for the manufacture of clothing, and ivory and bone for making tools.

Few mammals except foxes and tundra rodents are to be found on the land, none of them significant items of diet. The people did, however, make extensive use of edible plants, including the wild parsnip, cow parsnip, a kind of lily bulb, various berries, and the roots of anemones and lupines.

The Aleuts lived in villages, predominantly on the southern coasts of the island chain, and on the western third of the Alaska Peninsula. They developed a culture and language which show affinities with those of the Eskimos but are distinct and in many ways unique. At the time of the first European contact in 1741, the Aleuts were estimated to have numbered about 16,000. Some ancient village sites are known to have been first inhabited nearly 9,000 years ago (Laughlin. 1980, pp. 15, 65). Aleut homes were large semi-subterranean structures constructed from sod, drift logs, whale bones, timber, and grass, and accommodating up to 50 persons from several families. Inside, the building was divided into a number of stall-like living spaces along the side. These homes, known to the Russians as *barabaras*, were admirably insulated against the elements, but were damp, dirty, and poorly ventilated, especially against the smoke from the cooking fire or from the seal or whale oil lamps.

Clothing was fashioned from fur, bird skin, or intestine casings, and demonstrated not only practicality but great skill in manufacture. The Aleut parka reached to the ankles and had no hood, but rather a standing collar. Much of the year the people went barefoot, except for those living on the Alaska Peninsula, who used a kind of *mukluk*, boot. The hunters wore a distinctive wooden hat and eyeshade, often richly ornamented. Some articles of clothing were also artistically decorated with feathers or designs intricately worked from dried sea mammal bladder or gut (Lantis, 1984a, p. 170-171).

The men hunted sea mammals from a light skin-covered kayak known as a *baidarka*. Unlike those of the Eskimos, the Aleut boats often had two holes. The hunters used a double-bladed paddle for locomotion and threw barbed and sometimes poisoned harpoons and lances at their prey, which ranged in size from a sea otter to a baleen whale. Other hunting implements included bird darts, multipronged fish spears, and bows and arrows (Lantis, 1984a, p. 170-176). Besides the care of the house and children, a principal occupation of Aleut women was the manufacture and repair of clothing, a task that often involved long, tedious hours of skin preparation and sewing. Women were also skilled at weaving fine baskets and other receptacles from the local grasses.

The Aleut social organization included chieftains, known as *toyons*, who led by the force of their personality or by their exceptional skills. The class structure consisted of the wealthy, commoners, and slaves, the last usually captives in war. They were a quarrelsome people, feuding not only among themselves but also with neighboring peoples such as the Koniags or Peninsula Eskimos.

Aleut religion is imperfectly known today but appears to have been based on an animistic concept of the world. Persons, places, and objects had indwelling spirits, as did the earth, the sea, and even the air. All these spirits interacted in ways which among other things determined the weather, led to success or failure in the hunt, or caused illness. Success in life ultimately resulted from humans living in harmony with the spirits or manipulating them to their advantage, usually with the help of a shaman.

Health and the Stages of Life

Pregnancy, Childbirth, and Infant Care

An Aleut woman consulted her mother or grandmother as soon as she believed she was pregnant. The older woman then gave advice on matters such as diet, personal hygiene, and any taboos to be observed both by the woman and her husband during the pregnancy. For example, while eating or drinking she must think only of a person whom she wished the baby to resemble (Veniaminov, 1984, p. 188). Her husband was not permitted to use a hatchet, for fear of killing the child, nor could he club a resting sea mammal or take any part of a stranded whale, either of which indiscretions could result in stillbirth (Merck, 1980, pp. 198-199).

Beginning in the third month, the older woman regularly massaged the pregnant woman's abdomen. As the time of birth approached, she was taken to a special hut, probably the one where she had been confined during her first menstrual period some years before (Lantis, 1970, pp. 198-199). All food was cooked fresh in the hut, and drinking containers and any leftovers were kept covered. Any men's clothing or utensils were removed from the hut or covered up with a straw mat. No male was permitted in the vicinity at the time of delivery (Merck, 1980, pp. 174-175).

The woman gave birth in a squatting position, which she had to maintain for a long period. With the delivery of the placenta she was bent backward while the older women massaged her abdomen (Veniaminov, 1984, p. 189). No one touched the child until the placenta was expelled. The cord was then cut with a sharp shell or an arrowhead, after which the instrument was buried with the afterbirth (Merck, 1980, p. 175).

The child was washed and then warmed up in a parka or near the fire. Meanwhile, other attendants bound a belt across the mother's abdomen and carried her to another spot in the hut where she was made to squat as before, propped up by pads, for four days. On the fifth day she was at last permitted to lie or sit down, but not to stretch out. Throughout this period the women massaged her abdomen once a day, subsequently reducing this to twice weekly. For up to 40 days the mother was considered unclean and was not permitted to touch food intended for others or to see men (Veniaminov, 1984, p. 189). Her own diet consisted of clams and fresh fish (Merck, 1980, p. 175).

The old women also massaged the baby's abdomen to bring its organs into the proper place. One of them stuck her finger in the infant's throat to induce vomiting and thereby rid the child of all the "uncleanness" he or she had absorbed from the mother in the womb and which was thought to be the cause of later infirmities (Veniaminov, 1984, p. 190). This done, the infant began to suckle at the breast. If the mother was too weak to nurse initially, the baby was pacified by a piece of seal fat with a stick through it to prevent swallowing (Merck, 1980, p. 175). The infant was breast-fed until teeth erupted, after which the child was served a kind of porridge.

An infant who cried too much was taken to the shore and held naked in the water until the crying stopped (Ocheredin & Popov as cited in Hrdlicka, 1945, p. 171). Likewise, as the child grew older, he was often bathed in the sea and made to walk barefoot. Such practices were thought to inure the child against the cold, prepare him for later accidents at sea, and to help him develop courage and luck in the hunt (Veniaminov, 1984, p. 191; Ocheredin & Popov as cited in Hrdlicka, 1945, p. 171).

Aleut boys were reared and taught the skills of hunting and fishing by a maternal uncle, while girls were prepared for their tasks of daily living by their mothers and grandmothers. The children were given much freedom and corporal punishment was apparently unknown (Veniaminov, 1984, p. 191).

Infanticide was rare and largely limited to infants born out of wedlock. If a mother was suspected of killing her child, the community imposed strict sanctions on her. The belief existed that the spirit of a child secretly killed by its mother would enter the settlement every night and cry, causing serious misfortune (Veniaminov, 1984, p. 186).

Ornamentation

At the time of first European contact, the Aleuts ornamented their faces and bodies extensively. Such practices were probably carried out at specific ages and with ceremony, although many of the details are lacking. Of the types of ornamentation considered here, namely lip, nose, and ear ornaments, plus tattooing, each involved a type of surgical procedure, often carried out at a tender age. Most types of body ornamentation died out within 75 years of contact under cultural pressure from the Russians, who had a different view of beauty.

Labrets, or lip ornaments, were observed by nearly every early visitor to the Aleutians. The men sometimes wore a bone three inches long stuck crosswise through the chin just below the lip (Steller, 1922, p. 103). More common, however, were perforations in the lower lip into which were inserted pieces of ivory, bone, or colored stone in the shape of teeth (Korovin as cited in Hrdlicka, 1945, p. 85; Jochelson, 1933, p. 18). Such ornaments had a flat button-like end internally to prevent them from falling out (Tolstykh as cited in Coxe, 1787, p. 44). The wearer was able to draw the ornaments into the mouth with his tongue, but usually was inclined to leave them where they belonged, because cold air sucked through the empty holes made the teeth ache (Pallas as cited in Masterson & Brower, 1948, p. 43).

There were variations in the basic patterns. For gala occasions, the labrets were festooned with beads and amber rings (Levashov as cited in Jochelson, 1933, p. 19), and sometimes long, curved bones were inserted in the holes that reached almost to the ears (Soloviev as cited in Coxe, 1787, pp. 176-177). Less commonly, labrets were also worn in the upper lip (Tolstykh as cited in Jochelson, 1933, p. 10).

Although the early narratives are vague on this point, it appears that labret holes were made in infancy (Laughlin, 1980, p. 57). Once made, the perforations were kept from healing by the insertion of gradually larger plugs until the appropriately-sized labret could be accommodated (Jochelson, 1925, pp. 96-99).

By the last quarter of the eighteenth century the use of labrets was beginning to die out, especially among males (Ellis, 1782, pp. 1:283; 2:46). By the 1790s only a few old women were wearing labrets (Merck, 1980, p. 160). Some men still had empty holes but others no holes at all (Merck, 1980, p. 200; Sarytschew, 1806, p. 9).

Piercing of the nasal septum for the insertion of ornaments was also probably performed during the first year of life. The earliest observations indicate that some wore sharp narrow bones through the septum while others inserted a slate "pencil" about two and a half inches long through the hole (Steller, 1922, pp. 92, 103). Another account, probably from Adak, indicated that the stones worn in the nose often caused it to bleed (Del'Isle de la Croyere, 1922, p. 321). Many other early narratives describe the use of ivory, bone, feathers, or "black" grass inserted through the septum (Drusinin as cited in Coxe, 1787, p. 68; Bragin as cited in Jochelson, 1933, p. 19). The usual rod of bone was commonly decorated with rows of beads which hung over the mouth (Krenitsyn & Levashev as cited in Masterson & Brower, 1948, p. 57). As with labrets, the practice of wearing nasal ornaments was already declining by the time of the Cook expedition (Ellis, 1782, p. 2:46), but was still being observed by some of the men as late as 1805 (Langsdorff, 1814, p. 2:39).

Many kinds of ornaments were inserted into ear perforations, including bone, feathers, bits of coral, beads, amber, and enamel, some of these items having been obtained in trade with other Natives, or in later years with the Russians (Ellis, 1782, p. 2:45; Tolstykh and Ocheredin as cited in Hrdlicka, 1945, p. 88; Sarytschew, 1806, p. 9). Such decorations were observed in young children, indicating that the perforations were made at an early age (Jochelson, 1933, p. 18). Both men and women wore ear ornaments, but the custom seems to have lasted longer in women (Merck, 1980, p. 200).

Tattooing was another form of ornamentation that was widely practiced among both Aleut men and women (Bragin as cited in Masterson & Brower, 1948, p. 75). Most tattoos were applied during ceremonies attending puberty (Merck, 1980, p. 174). Designs were sometimes very elaborate, especially on the face, forearms, and backs of the hands.

Two main methods were used for producing these designs. One involved drawing a sooty thread through the superficial layers of the skin (Drusinin as cited in Coxe, 1787, p. 68), and the other consisted of pricking the skin repeatedly with a needle and rubbing in either black clay (Solov'ev as cited in Hrdlicka, 1945, p. 81) or coal dust mixed with urine (Langsdorff, 1814, p. 2:40). Since the Russians objected to the women tattooing their faces, the custom rapidly disappeared, except in some of the more remote islands.

Maturation

When an Aleut girl underwent her first menstrual period, often around twenty years of age, she was immediately taken to a separate *barabara*, or else a special section of the family dwelling was curtained off for the purpose (Merck, 1980, pp. 174, 178). There she remained for 30 - 40 days, during which time she was not permitted to

emerge for any reason. Only her mother or other close female relatives were permitted to visit to bring her food and drink (Veniaminov, 1984, p. 210). Males could approach the site only if they were seeking healing, especially of seasickness, a power that pubescent girls were reputed to have (Laughlin & Marsh, 1951, p. 84).

At the beginning of the period of confinement, the female relatives bound each of the girl's joints with a waxed cord, to prevent premature senility, joint disease, and even dangers to the village's food and water supply (Laughlin & Marsh, 1951, p. 84). If the girl attempted to leave her isolated area, her skin was said to turn black and she would become subject to infectious diseases, which might in turn be passed on to others (Veniaminov, 1984, p. 210). When the long period of seclusion was finally over, the girl washed herself daily for five days and then returned to a fairly normal life. Although she was not permitted to go to sea for a period of five further months. The belt she wore during her isolation was saved for its continuing curative powers (Laughlin & Marsh, 1951, p. 85).

Similar restrictions during her menses were required of a girl or woman throughout her life. For her second period she was isolated for 20 days and thereafter for seven days of each month when she was menstruating. Married women were not required to live in a separate dwelling but they could not sleep with their husbands for the seven day period, and subsequently only after washing three times. Failure to observe these restrictions might result in her husband's sickness, poor luck in the hunt, or even death from drowning or other mishap (Veniaminov, 1984, p. 210).

Besides isolation, there were other taboos associated with menstruation. For example, a woman was not allowed to do any kind of work during this time, even mending her husband's clothing (Merck, 1980, pp. 174-175). She could not go near a body of water, and men hid their hunting implements or talismans so that she could not touch them, even inadvertently (Lantis, 1970, p. 204). The story is told of a hunter who had unintentionally approached a menstruating woman. When he then shot a whale he became afflicted with a nosebleed, his body swelled up, and finally he lost his mind and died (Veniaminov, 1984, pp. 210-211).

During the days of her menstrual flow, an Aleut woman wore a type of sanitary towel which consisted of a belt around the waist and another between the legs. The binding was lined with fine moss which could be changed several times a day (Merck, 1980, p. 178). The soiled moss was disposed of most scrupulously, since improper disposal might drive away all creatures from the vicinity of the village (Veniaminov, 1984, pp. 210-211).

A curious feature of Aleut culture was the practice of bringing up certain male children as females. Some men had several wives, and in addition what one early narrative described as "an object of unnatural affection, who is dressed like the women" (Krenitsyn & Levashevig as cited in Masterson & Brower, 1948, p. 59). A later writer described the relationship somewhat differently, as "male women" taking a wife (Merck, 1980, p. 174). Dr. Langsdorff (1814, p. 2:48), visiting the islands in 1805, observed boys whose beards had been plucked out and who were ornamented, including tattoo designs, in the female manner.

Old Age, Dying, and Death

Aleuts often lived to an advanced age, as shown not only by archeological findings but by the careful records kept at Unalaska by the early Orthodox missionary Father Veniaminov. The latter showed that some 20% of Aleuts lived past the age of 60 and a few survived to the age of 90 or more (Laughlin, 1980, pp. 10-13). A visitor to Unalaska in 1816 met and talked with an Aleut reputed to be more than 100 years old (Chamisso, 1986, p. 44). The elderly were well treated and kept active as long as possible. The men continued to hunt in protected bays and shallows and the women carried on their tasks such as sewing or gathering berries, as strength and skills permitted (Laughlin, 1980, p. 15).

Unlike some other Alaska Native groups, the Aleuts did not have an inordinate fear of death or dying. When a husband died, his wife retired into a dark hole, where she remained for 40 days. A favorite wife might be given the same honors by her husband. If both parents died, however, the children were left to shift for themselves (Krenitsyn & Levashev as cited in Masterson & Brower, 1948, p. 59). Aleut chiefs, *toyons*, often had boys to serve and accompany them. When such a chief died, the boy was sometimes strangled and buried with him (Merck, 1980, p. 80).

Corpses were buried in a sitting posture, but whether in a compartment of the communal house or in a cave, and whether or not in a coffin, depended on factors such as the time of year, the circumstances of death, and the individual's social class (Lantis, 1970, p. 215). Sometimes they made mummies by removing the viscera through an abdominal or perineal incision and stuffing the body cavities with dried grass. Such a mummy was kept perfectly dry and placed in a cave together with his best clothing and his hunting gear (Laughlin, 1980, pp. 97-101). On occasion the corpse of a dead child was dried and hung over the mother's bed until her next child was born (Merck, 1980, p. 77).

Two other practices associated with death---dismemberment and autopsy---deserve mention since they both bear indirectly on health, and demonstrate the Aleuts' knowledge of anatomy. When an enemy was killed, the victor dismembered the body into small pieces, including disarticulation of the joints, in order to dissipate the power of the slain individual. Such a practice was believed to protect the living from the power of the dead to cause them future harm (Laughlin, 1980, pp. 103-104). The second practice, autopsy of the dead, was said to have been performed on persons killed in battle or on dead slaves in order to learn better methods of medical treatment (Veniaminov, 1984, p. 290). Whatever the truth of this statement, it is apparent that the Aleuts possessed an extensive anatomical knowledge, which is reflected not only in their surgical practices but especially in the rich anatomical vocabulary of their language. Some terms denoted very specific internal structures and were both poetic and whimsical in their derivation (Marsh & Laughlin, 1956).

Traditional Medicine

Causes of Disease

The Aleuts believed that many rules and prohibitions governed daily life and that an infraction---whether intentional or not---could lead to illness or other adverse consequences. Good health involved a state of harmony with nature. A summary of traditional health wisdom was preserved by Father Veniaminov (1984):

[F]or health and [robustness of] physical strength and for longevity, everyone had to perform the following custom or rule: not to sleep through the dawn, but at the first light, to go naked outside and stand, facing the east, or where the dawn appears. Opening the mouth wide, one should swallow the light and the wind. Then one should go to the stream from which the drinking water is obtained, strike [the surface] several times with the palm of the right hand and say: I am not asleep, I am alive....(pp. 211-212)

The heavenly bodies held a special significance for health and had to be treated respectfully. For example, to speak badly of the sun could lead to blindness, while the moon's detractor might be killed by a stone. If a man spoke ill of the stars, they could force him to count them and, if unable to carry out the task, they could cause him to lose his mind (Veniaminov, 1984, p. 217).

Many taboos were associated with daily living. A hunter who failed to observe certain rules might suffer injury or illness. Other taboos, already touched upon, involved menstruation, childbirth, and infant care. Certain sacred places were also forbidden to women and boys. Gathering grass or pebbles in such areas could lead to a terrible disease, insanity, or death (Veniaminov, 1984, p. 218).

The elders of the village often gave amulets to their grandchildren in the form of a lock of hair or a piece of clothing to keep them healthy. Sometimes the saliva of an old man famous for his great deeds was given to young children to swallow in the belief that this would protect them from infections or epidemics (Veniaminov, 1984, p. 224). The most powerful amulet of all was a piece of a corpse which might endow its possessor with special powers but might also cause blindness or early death (Laughlin & Marsh, 1951, p. 85).

Healers

Shamanism may have been less highly developed in the Aleutians than in some other parts of Alaska, at least with respect to healing. The explanation for our meager knowledge may lie, however, in the early and diligent efforts of the Russian Orthodox missionaries to discourage the practices of the shamans.

The shamans' task was to be "intermediaries between the visible and invisible worlds, between man and spirits" (Veniaminov, 1984, p. 219). They also prescribed behavior, foretold the future, assisted hunters to find their quarry, and healed the sick. Shamans were usually male, although not exclusively so (White, 1880, p. 47). The calling was not generally passed from father to son, as in many cultures, but rather a boy became a shaman only when there seemed to be evidence that he was of a certain temperament and set of mind. Once he demonstrated his ability to commune with the spirit world, an established shaman began to tutor him in the special skills of the profession, including healing. A shaman was held in great respect, no doubt mixed with fear, by the Aleut people (Lantis, 1970, p. 236).

Besides the shamans, other individuals assumed certain responsibilities in times of endangered health. Older female relatives, as we have seen, assisted in pregnancy, childbirth, infant care, and at the time of first menstruation. Older women also engaged in the practice of massage, or "holding the stomach", for persons with abdominal pains or other internal disorders.

Another type of healer was an individual who was skilled in surgical procedures, such as lancing, piercing, or bleeding. These special abilities were carefully cultivated not only by clinical experience, but also by the performance of animal dissections and even by autopsies on humans. Such surgeons were famed for their knowledge and passed their skills on only to their favored sons or grandsons (Veniaminov, 1984, p. 293).

Besides these healers with special knowledge and experience, family members also took care of many minor illnesses and injuries, using traditional plant or animal substances. Recourse to other practitioners was limited to the more serious conditions which were beyond the skills of the family.

Magico-Religious Healing

The Aleut shaman had three principal functions with respect to the sick: namely, to search for the cause of the illness, to give a prognosis (i.e., or prophecy of the cause of the illness), and to prescribe a means of cure. Individual contact with familiar spirits helped the shaman to determine the cause of the illness, such as the breach of a taboo, or the failure to observe a ritual. To render a prognosis was a natural extension of the shaman's prophetic ability. The methods were probably in part spiritual and in part based on a keen observation of the natural history of the disease, for early observers were impressed with the shaman's skills in this regard (Merck, 1980, p. 176; Veniaminov as cited in Kashevaroff, 1927, pp. 53-54). The shaman achieved a cure by passing on specific instructions to the patient from the helper spirits. For example, the shaman might prescribe a specific ritual to be followed, or might give the patient a charm with instructions for its use (Hrdlicka, 1945, p. 156). The shaman sometimes also used plant substances, such as the root of a certain grass and birch bark, to aid in treatment (Veniaminov, 1984, p. 367).

As for actual techniques, an early Russian trader wrote: "In their divinations, they put on wooden masks, made in the form in which they say the *Kugan* [demons] appeared to them; they then dance with violent motions, beating at the same time drums covered with fish skins" (as cited in Coxe 1787, p. 217). Another contrasting account refers specifically to a healing ceremony: "[They] assume no particular garb, nor use any extravagant gestures in their exorcisms, but calmly sing with the other Aleutians, sitting in one posture, and sometimes beating on a drum" (Saryschew, 1806, p. 76). Other methods involved the use of special songs or chants, dances, and plays.

Empirico-Rational Healing

The Aleuts made greater use of medicinal plants than most Alaska Natives, possibly because the relatively mild climate permitted access to plant life through much of the year. One of the earliest records described the use of the boiled root of *Angelica*, or wild parsnip, both internally and externally for the treatment of wounds, and the use of sorrel as an internal remedy (Merck, 1980, p. 176). According to another account, various astringent roots were used for diarrhea, along with the root of the *makarsha* plant. Decoctions made of various bitter herbs were employed for fevers and respiratory complaints (Veniaminov, 1984, p. 293).

In modern times Bank (1953) has reconstructed many of the traditional plant remedies used by the Aleuts in earlier times. Aromatic yarrow (*Achillea borealis*) was an important treatment used for stomach pains, colds, chest disorders, and nosebleeds. For gas pains and other stomach disorders an infusion of *Matricaria matricarioides* was administered. Tonics were derived from several plants including the roots of avens (*Geum calthifolium*), the leaves of hemlock parsley (*Conioselinum gmelini*) and wild parsnip (*Angelica lucida*), and the roots of pondweed (*Menyanthes trifoliata*). Pond scum was gathered for bathing open sores or sore eyes. *Artemisia unalaskensis* was heated over hot stones and used as a switch during steam baths to beat out rheumatic pains. Infusions of clubmoss and reindeer moss were found useful for pains. Other plants such as the iris were valued for their laxative properties.

The Aleuts also employed certain non-plant substances for their healing properties. Warm fish oil or the fat of land mammals such as foxes were used to cleanse a healing wound. Fat from the skull of a fox was supposed to have special properties in this regard. Wounds were sometimes sprinkled with powdered teeth and then covered by a dressing made from the fresh skin of a mouse (Veniaminov, 1984, p. 292). The saliva of a girl isolated at menarche had healing properties and might be rubbed on a sore back, aching joints, or on open sores for the relief of pain (Laughlin, 1980, p. 105). Use of the saliva of an elderly man has already been mentioned as a preventative.

Surgical methods of treatment were rather highly developed among the Aleuts, in part as an outgrowth of their exceptional knowledge of anatomy, which was in turn derived from their practice of dissections, autopsies, and the making of mummies.

Although little is known of the actual techniques, the commonest surgical procedures performed by the Aleuts were those involved in the preparations for body ornaments. These included the making of slits in the upper and especially the lower lip, perforation of the nasal septum and multiple perforations of the pinna of the ear, not to mention tattooing. Most of these were done on infants and children and of course without benefit of anesthesia.

An early report from the Andreanof Islands described the suture of wounds: They hold the wound by the hand and another man sews it with a bone needle, threading the needle with a sinew, and so daringly performs the operation as if he were working on a piece of leather. The patient himself sits smiling and holds the wound by his hand, as if not feeling the pain. (Tolstykh as cited in Jochelson, 1933, p. 11)

More characteristic of Aleut surgery, however, was the practice of "piercing," or "puncturing." Veniaminov (1984) described it graphically:

So, in order to let out all the bad blood and the foul smell or air [dukh], they punctured the patient on both sides below the ribs with stone lancets. But this operation was performed only by the most skilled physicians because here detailed knowledge of where and how deep to puncture and how much air [dukh] to let out was required. Otherwise, it was possible to injure the internal organs and by letting out all the air [dukh] send the patient to the other world. It was used with such amazing success, patients themselves assured me, that after the operation a man who was almost dead in the morning became completely well toward evening. (pp. 292-293)

Although piercing might be used as a last resort in critical cases, it was also employed in less serious conditions such as eye disease, where the skin was pierced between the eyes or on the nape of the neck. Practically any part of the body might be pierced; Veniaminov (1984, p. 293) knew of one man who had submitted to it 40 times. Even in the late nineteenth century, older Aleuts displayed scores or even hundreds of scars from such treatments (White, 1880, p. 41). The technique of piercing involved marking the skin accurately over the affected part, sometimes with two dots, then raising a pinch of skin and inserting the lancet "to let out air" (Laughlin, 1980, p. 115).

Bloodletting, or bleeding, differed from piercing in that the primary purpose was to draw off blood rather than "bad air." For this procedure a flint knife was used to make an incision, sometimes directly over a vein (Krenitsyn & Levashev as cited in Masterson & Brower, 1948, p. 57). Merck (1980) gave a more detailed account of the use of this technique: "If a pain-inflicted part of the body seems favorable for bleeding, then a person experienced in this art will pierce obliquely, deep into the tissue. If plenty of blood flows, then they have good hopes for recovery..." (p. 176). Usually they bled themselves between the ribs at the breast. If the heart seemed affected, or if they suffered nausea and lack of appetite, they scratched themselves below the tongue to cause bleeding. Other conditions for which bleeding was employed included large swellings, headache, weakness, and loss of appetite (Veniaminov, 1984, p. 293). The practice was very widespread and was "resorted to" according to a late nineteenth century doctor "in every real or fancied disturbance of the health" (White, 1880, pp. 40-41).

Besides its use in the treatment of disease, bleeding also was apparently employed on young men on a yearly basis as a kind of tonic. On a windless day, blood was removed in succession from the long saphenous vein on the inner side of either ankle or from either antecubital vein at the bend of the elbow (Laughlin, 1980, p. 115).

The art of massage, or "holding," was highly developed among the Aleuts and was a specialty of older women. Massage was used during pregnancy and childbirth but also was employed as a form of treatment. Veniaminov (1984) describes the technique:

If a patient feels a gnawing or a pinching in the stomach,....he is placed on his back, and the Aleut [female] physician with both hands holds his belly, lightly massaging and manipulating with her fingers the internal organs, in order, they say, to bring them back into orderly arrangement, to place everything into the proper places. Many who have experienced this method of treatment commend it. (p. 293)

Another method of treatment that was highly important to the Aleuts was fasting; in fact, the rejection of all food and drink was usually the initial mode of therapy for any significant illness or injury. Dangerous wounds were treated by a strict fast for two to four days, without even a drop of water being allowed, since food and drink were believed to be responsible for wound suppuration (Veniaminov, 1984, p. 291). Fasting, especially the avoidance of whale oil, was also recommended for sickness, but here the prohibition of food and drink was not as rigid as in trauma (Merck, 1980, p. 177).

A sick man was sometimes treated in a separate cabin especially built for him. There he was tended by a man experienced in the care of the sick. According to one early narrative women could not be entrusted with this task because they were considered unclean and the looks in their eyes could not be trusted (Merck, 1980, p. 176).

As mentioned earlier, a girl during her first menstrual period had special therapeutic powers, especially against seasickness. The sewn cloth belt used during this time retained various healing powers long after the period of seclusion. For example, it could be coiled up and applied to any diseased portion of the body to promote healing. The belt worn by a widow during her confinement after the death of her spouse was even more powerful (Laughlin, 1980, p. 105).

A final method of healing was the use of hot volcanic pools, where the Aleuts traditionally resorted to treat such conditions as arthritis and chronic skin diseases. These pools and springs were widely distributed in the Aleutian Islands and their warmth and high mineral content no doubt gave much comfort and relief to the afflicted in the cold and damp climate (Veniaminov 1984, p. 214; Netsvetov, 1980, pp. 91, 99, 125).

Perhaps the most striking character trait of the Aleuts during sickness or injury was their patience--a patience and resignation bordering on insensibility. Veniaminov (1984) described this characteristic in a man whose leg was caught in a fox trap, apparently a not uncommon injury: When he is ill, you do not hear a groan or cry from him,

even when in cruelest pain...Caught in such a frightful [fox] trap, an Aleut, quietly and with the utmost presence of mind, lets someone do the necessary operation, that is, to pull the iron teeth from his leg.... (p. 167)

Not infrequently the victim extracted himself from the trap, and then underwent a strict three-day fast.

CHAPTER 2. THE ESKIMOS OF THE NORTH PACIFIC

The Setting

The coastal areas of the north Pacific rim, including the Kodiak archipelago, parts of the southern shore of the Alaska Peninsula, the Pacific littoral of the Kenai Peninsula, and Prince William Sound as far as the eastern approaches to the Copper River, were the home of a large population of Pacific Yupik, or southern, Eskimos who spoke a distinctive dialect known as Suk. Three subgroups have been differentiated: the Koniags, who inhabited Kodiak and Afognak Islands and perhaps part of the Alaska Peninsula, the Unixkugmiut, who lived along the Pacific coast of the Kenai Peninsula, and the Chugaches of Prince William Sound. A fourth group, known as the Peninsular Eskimos, may also have been Suk-speaking (Oswalt, 1967, pp. 2-9).

These peoples inhabited two distinct ecological regions. The first included the greater part of eastern coast of the Alaska Peninsula and the western two-thirds of Kodiak Island, both of which are mountainous and treeless, although for the most part covered with a rich carpet of grass, moss, and shrubs. In contrast, the northeastern third of Kodiak Island, Afognak Island, the Pacific shore of the Kenai Peninsula, and the coast and islands of Prince William Sound are all covered by tall spruce forests, with stands of cottonwood, interspersed with thickets of willow, alder, elderberry, and ferns, in the valleys and sheltered areas. Tall, rugged mountains come close to the water's edge throughout most of the region and the coastline is frequently indented with deep fiords, sometimes terminating in a glacier. The only substantial river in the region is the Copper, the mouth of which in early historic times was controlled by the Eyak Indians.

The climate of the region is generally damp and stormy, although with moderate temperatures due to the warm Japanese Current that flows northeastward into the Gulf of Alaska. The sky is overcast about 70% of the time. Precipitation on Kodiak Island averages about 60 inches annually, whereas in Prince William Sound it is three times as heavy. Sudden storms with high winds, rain or snow, and heavy seas are typical and make navigation everywhere treacherous.

Sea mammals are abundant in the waters of the gulf, including several kinds of whales, Steller sea lions, porpoises, and sea otters. Many of the small rivers and streams are rich spawning grounds for the various species of Pacific salmon. The offshore waters, estuaries, and bays teem with other edible fish such as Pacific cod, tomcod, halibut, sailfish, and flounder, not to mention crabs, mussels, and clams. Herring migrate into Prince William Sound each spring in vast numbers.

Land mammals include the great Kodiak brown bear, land otter, weasel, and red fox in the west, and further east large animals such as black bear, black-tailed deer, Dall sheep, mountain goats, and small fur-bearers like beaver, mink, and marmot. Caribou once ranged the tundra of the Alaska Peninsula.

Bird life is incredibly rich throughout the region but especially in Prince William Sound, where more than 200 species, about half of them water-birds, have been identified. Although most birds merely pass through on their

spring or fall migrations, many others nest in the area.

As already mentioned, the Eskimos of the Pacific rim comprised at least three and possibly four groups of Suk speakers, but only two, the Koniags and the Chugaches, will be discussed here. Very little information is available on the others.

The Koniags, who at the time of first European contact inhabited Kodiak and Afognak Islands and perhaps part of the adjacent mainland, probably migrated there between 1000 and 1200 A.D., although evidence of human habitation in the region dates back to at least 5000 B.C. (Dumond, 1984, p. 75). By actual count in 1792 the Koniags numbered 6500, making them not only the most populous single Eskimo group, but also making Kodiak Island the most densely populated area inhabited by the Alaska Natives (Oswalt, 1967, p. 108).

The people lived in stable winter villages located in a sheltered bay, the lee of a small island, or at the mouth of a river. They usually spent the summer months at a fish camp close to a salmon-spawning stream. Their homes were large semi-subterranean multi-roomed structures made from sod and planking and housing 20 or more people. Each dwelling had a spacious central room with a fireplace, and small sleeping chambers at the side heated with hot stones brought from the main hearth. The central room served not only as a kitchen and eating area, but also as a meeting place or workshop. Besides the sleeping rooms, other small spaces included storage area and a sort of steam bath, the latter luxury pre-dating the arrival of the Russians (Clark, D. W., 1984, p. 191).

The Koniags subsisted largely on sea mammals, fish, and other resources of the generous sea. Seasonally they hunted whale, sea lion, sea otter, and fur seal from their two-holed *baidarkas*, with the front man throwing the harpoon and the rear man paddling. Whaling was a specialized type of hunting carried out only by experienced and respected men. Many types of fish were caught with traps, nets, and spears, but salmon and halibut were the staples. When other types of food were scarce, the Koniags, like the Aleuts, supplemented their diet with shellfish.

Their clothing resembled that of the Aleuts, especially the long, hoodless fur and birdskin parkas and the rain parkas made from strips of dried intestine. The people did not use gloves or trousers and during the warmer months went barefoot. The hunters wore slanted, conical wooden hats, or sometimes hats woven from twined spruce root.

They lived in nuclear family groups of 20 or more individuals within the villages. The position of village chief was inherited, or at least filled by a member of a noble family, but it had to be maintained by an earned respect. Some chieftains were apparently responsible for overseeing multiple villages.

Ceremonialism was highly developed among the Koniags. They saw the world as inhabited by many spirits and mysterious beings such as giants, dwarfs, and evil shamans' helpers. All of these had to be placated by proper attention to ceremonies and taboos. Wise men in the community were responsible for the organization and conduct of religious ceremonies and for the propagation of essential knowledge (Clark, D. W., 1984, p. 194). A *kashim*, or ceremonial house, could be found in most villages.

The Koniags were a very warlike people who often skirmished with the Aleuts, Chugaches, Tanaina Indians, and the people from the Alaska Peninsula. They frequently made slaves of captives taken in war. Not all contacts were hostile, however, and the people were not averse to borrowing useful cultural traits from their neighbors.

The Chugaches were especially close to the Koniags both in language and culture, but displayed their own uniqueness. The earliest census, in 1825, recorded about 1,600 individuals, but it is likely that the number was higher at the time of first European contact in 1778. They lived in stable villages, each with a recognized chief.

By their geographic position, the people were exposed to cultural pressure from all sides. To the west and southwest were their Eskimo cousins the Unixkugmiut and the Koniags, to the northwest and northeast were two groups of Athapaskan Indians, the Tanaina and the Ahtna respectively, while to the southeast were the ever-hostile Tlingit. Finally, their territory was split by the Eyak Indians, who controlled the mouth of the Copper River.

The Chugaches lived in plank houses in the winter and in interior-framed bark-covered shelters in the summer. Houses were equipped with a central room and outlying sleeping chambers. They subsisted primarily on sea mammals and fish, although on occasion hunters killed bears and goats in the mountains. They used two-holed *baidarkas* for hunting sea mammals, which they attacked with poisoned slate-tipped harpoons. Salmon were caught at the mouths of streams with traps, weirs, and darts, whereas herring were dipped up in nets and larger fish caught with hooks. They used bows and arrows and throwing boards to kill sea birds. When other food was scarce, they ate shellfish, seaweed, roots, and berries.

Chugach clothing included long parkas of bird or animal skins, boots fashioned of sealskin and salmon skin, and rain-gear made from eagle skins or the skin of an entire bear.

Like the Koniags, they were a warlike people, fighting their principal enemies the Tlingit, Tanainas, Ahtnas, and Eskimo neighbors with spears, clubs, and bows and arrows. Captured women and children were kept as slaves to do the menial tasks of the household.

Health and the Stages of Life

Pregnancy, Childbirth, and Infant Care

When a Koniag woman approached her time of delivery, an old woman escorted her to a small building constructed of reeds and grass away from the main dwelling (Gideon as cited in Black, 1977, p. 94; Lisiansky, 1814, pp. 200-201). During labor the old woman stretched and pummeled her abdomen to hasten delivery and diminish after pains, a practice that occasionally led to stillbirth (Davydov, 1977, p. 164). Following delivery the attendant tied the cord, washed the infant in cold water and then departed (Gideon as cited in Black, 1977, p. 94). No other ceremony attended the birth (Merck, 1980, p. 205).

Following delivery the mother was obliged to remain in the hut for five days if she were an older woman and ten days if she were young. During this time no male could enter. Finally a sweat bath was prepared for mother and child, following which both returned to the regular dwelling (Gedeon as cited in Pierce, 1978, p. 127). Another early source reported that the mother and child stayed in the hut for 20 days, during which she was considered so unclean that no one could touch her and food had to be thrust in on the end of a stick. Thereafter she washed herself and her infant with cold water in the open air and then took a steam bath (Lisiansky, 1814, p. 201).

A pregnant Chugach woman would look at the full moon and breathe in deeply in order to make her baby's face round and handsome. To ensure an easy delivery she would drop pebbles behind her as she walked along.

Childbirth took place in a small lean-to made from poles and branches and heated with warm stones. At the time of delivery the mother squatted on her hands and knees and an old woman serving as midwife squatted behind her to assist. The newborn infant was wrapped in moss and placed on a loon skin for luck. The midwife cut the cord with an *ulu*, a woman's knife, tied the end with grass, and then rubbed devil's club ashes on the stump to promote healing. The mother ate a piece of raw fish to make the cord fall off, which it usually did in about three days. The dried cord and caul, if there was one, were hung around the father's neck as an amulet. The placenta was buried in a dry place or on the beach at dead low tide.

The mother was not allowed to eat fish again or raw meat for two or three weeks, but was given dried seaweed boiled with salmon roe to encourage the flow of milk. She took a sweat bath on the second day and every day thereafter, but she and her infant were required to remain in the tiny shelter for forty days after delivery. After the end of this period she took a steam bath, put on new clothing and buried her old ones. A great feast celebrated her return, with her child, to the village (Birket-Smith, 1953, pp. 83-85).

Koniag children were breast-fed up to the age of three years, or even longer if another pregnancy did not ensue. They were never swaddled in infancy, but rather kept in a simple cradle on the floor. Parents expended considerable effort on toughening their children for the rigorous life ahead. A crying baby was plunged into water, even in winter, until the crying stopped. As children began to walk, they were allowed to run barefoot over the rocks and grass with minimal supervision in all kinds of weather. In the winter months, children were driven into the sea and made to remain there in order to inure them to the cold. At the age of six or seven a son was taught to paddle a *baidarka* and before long was permitted to move alone into the open sea. Despite this early familiarity with the sea, however, few if any Koniag children learned to swim (Davydov, 1977, p. 164). Infanticide was not known from the earliest contact period but later despairing mothers sometimes practiced abortion or intentionally starved their children to prevent their becoming slaves of the Russians (Hrdlicka, 1944, p. 80; Gedeon as cited in Pierce, 1978, p. 58).

Chugach children were sometimes nursed until the age of 10 or 12, after which their care, training, and discipline were taken over by their uncles. As soon as a boy began to walk, he was beaten on the arms and legs with a weasel

skin in order to make him quick like the weasel. Likewise, as he grew older his uncles or father toughened him by sometimes throwing him into the water or beating him with spruce boughs (Birket-Smith, 1953, p. 87).

Ornamentation

The Koniags, perhaps more than any other Alaska Native group, ornamented their bodies in many ways, nearly all of them requiring a minor surgical procedure. The exact technique of most of these procedures is unknown, but it would appear that incisions were made around the time of puberty either by a close relative or someone specially skilled in the technique. The size and weight of ornaments in some cases seemed to be proportional to the individual's social standing in the community (Holmberg, 1856-63, p. 362).

Although the evidence is sometimes conflicting, it would appear that most men had a slit up to four inches long through the lower lip and parallel to the mouth. When this slit was empty, as it frequently was, it had the appearance of a second mouth (Shelikhov, 1981, p. 53) through which the individual could stick his tongue freely or through which food or liquids might spill (Davydov, 1977, p. 150). Often, however, the men wore in the slit pieces of bone shaped like teeth (Glotov as cited in Hrdlicka, 1944, p. 47), or pieces of coral, metal, bone, or stone (Lisiansky, 1814, p. 195).

Koniag women usually had instead of a long slit several perforations, ranging from two to six, into which were inserted either tooth-shaped pieces of carved bone (Lisiansky, 1814, p. 195) or small bone pegs on which were suspended little rings of blue garnets or pieces of coral or shell (Davydov, 1977, p. 148; Merck, 1980, p. 103; Gedeon as cited in Pierce, 1978, p. 134).

Nearly all Koniags had their nasal cartilage perforated and wore an ornament of some kind in it (Glotov as cited in Hrdlicka, 1944, p. 42). The men generally wore a long slender bone or a bundle of stiff sea lion whiskers through the aperture. Often the bone, up to five inches in length, was bedecked with beads or bits of coral (Shelikhov, 1981, p. 53), a picture that prompted an American sea captain to remark that it reminded his sailors of a "sprints' yard" (Campbell, 1819, p. 78). Although women sometimes wore a slender bone through the septum, the more usual ornaments were garnets or strips of beads, mother-of-pearl, or coral (Davydov, 1977, pp. 148-149; Merck, 1980, p. 103).

Nearly every Koniag wore ornaments in multiple perforations around the rim of the ear (Shelikhov, 1981, p. 53). From these holes the women suspended strings of beads, coral, or garnets, or if wealthy perhaps bits of amber (Holmberg, 1856-63, p. 362). Sometimes the number of strings of hanging ornaments was different in the two ears (Merck, 1980, p. 103). Men also usually decorated their ears with beads (Davydov, 1977, pp. 149-50).

Tattooing was also extensively used as a form of body ornamentation. Both sexes tattooed the face and to a certain extent the breast, shoulders, arms, and wrists as well (Shelikhov as cited in Hrdlicka, 1944, p. 44; Merck, 1980, p. 103). Some of the patterns, especially lines on the chin, were applied after a girl's first menstrual period

(Merck, 1980, p. 103), and other lines on the arms and body were inscribed when she married (Davydov, 1977, p. 149). The Koniag technique of tattooing involved piercing the skin with a sharpened sea gull bone and then rubbing in coal dust (Merck, 1980, p. 103). Another method was to lift a small piece of skin with the point of a needle until blood showed and then apply an "ink" made from fir charcoal mixed with blood (Gideon as cited in Black, 1977, p. 98).

The Chugaches ornamented their bodies in ways similar to the Koniags. Captain Cook described the consternation of one of his sailors when he saw a man "with two mouths" who enjoyed thrusting his tongue through the large slit in his lower lip (Cook, 1967, p. 3(1):350). The long slit seemed to be found primarily in adult males, who sometimes wore in it various types or ornaments such as feathers, bones, beads, or green jasper (Sarytschew, 1806, p. 22; Walker, 1982, p. 150). Often bones fastened together by a string had the appearance of a second row of teeth and were an impediment to speech (Cook, 1967, p. 3(1):350). Women and younger males had a series of perforations in the lower lip and usually wore pieces of shell or bone in the shape of teeth (Meares, 1790, p. xxxi). An earlier, simpler pattern consisting of a hole just lateral to either corner of the mouth is known from a male Chugach mummy in the U.S. National Museum (Dall 1884, p. 88).

Information on Chugach nose and ear ornaments is scanty. One early account described a small bone inserted through the nasal septum (Arteaga, n.d., p. 97) and a later ethnographer found that the people used as nasal ornaments not only bone, but pieces of wood, the shaft of a feather, or a string of beads or dentalium shell. Ear ornaments of shell, bone, or amber were worn by both sexes in perforations extending around the edge of the ear (Birket-Smith, 1953, p. 69).

Tattooing was minimal among the Chugaches, and was found principally among females. At the time of marriage, three lines were tattooed on the chin; later the wrist and chest might be tattooed as a means of stimulating milk secretion. The method employed was that of drawing a sooty sinew thread under the skin (Birket-Smith, 1953, p. 69).

Maturation

At the time of her first menstrual period, a Koniag girl was banished to a small, low hut resembling a dog kennel (Davydov, 1977, p. 171). One eyewitness described the hut as constructed of branches with a rounded vault and measuring three feet two inches by two feet seven inches, and only two feet four inches in height (Lisiansky, 1814, p. 201). In this tiny space the girl was sequestered for up to six months, spending most of her time on her knees with her back bent. After this long, uncomfortable sojourn, the hut was enlarged to permit her to stand. There she spent a further six months of isolation with only minimal contact with the outside world. At the conclusion of the year she was welcomed back to her parents' home with a great celebration in her honor. Thereafter she was considered eligible for marriage and all the other responsibilities of full womanhood (Holmberg, 1856-63, pp. 401-402).

During subsequent menstrual periods a woman was expected to retire to a similar hut for the duration of her bleeding. During this time she was not permitted to leave the hut and her food and water were brought in special containers (Gideon as cited in Black, 1977, p. 95). At the end of her period she washed herself thoroughly and returned to the village (Davydov, 1977, p. 171).

Menstrual customs among the Chugaches were less demanding. At the time of her first period a girl was taken aside by her mother into one of the sleeping rooms of the main house and there confined for 10 to 12 days. There she was fed only at night, but was not permitted to eat fresh meat, blubber, or blueberries (Birket-Smith, 1959, p. 154). At the end of the isolation period, the girl was blindfolded and led by an elderly relative to the beach or to a waterfall. The attendant built a fire and the girl plunged five times into the water, running around the fire after each wetting. Thereafter she dried her hair by the fire, and then was blindfolded again to be led home again to resume her normal life (Birket-Smith, 1953, p. 88).

During subsequent menstrual cycles a woman was isolated in her sleeping room until the bleeding stopped. She was not permitted to cook, nor could she herself eat certain foods such as fresh meat, fish, grease, and seagull eggs. Breaking the food taboos was punishable by beating. If the offense was not discovered, the older women would be subject to disease or bad luck. She was also forbidden to touch any item of hunting gear or any paraphernalia of the shaman during her menses. Any objects thus contaminated had to be discarded and destroyed (Birket-Smith, 1953, p. 88).

At the age of 14, a Koniag youth learned to paddle a *baidarka* and to fish and spear birds in calm bays and inlets. By the age of 16 he would accompany his father on sea otter hunts. A young man married only when he was able to prepare the necessary gifts and clothing. His bride was not uncommonly older than he (Gedeon as cited in Pierce, 1978, p. 127), and had to be selected with the permission of his own father as well as that of the girl's father. Newlyweds remained chaste for a five-day period (Gideon as cited in Black, 1977, p. 95).

When a Chugach youth killed his first large animal, such as a seal, sea lion, sea otter, or bear, a special ceremony was held in his honor. The boy himself fasted for three days while the meat from his kill was being distributed. Thereafter his parents gave a feast at which the boy was dressed as a baby; two old women then re-enacted the hunt, one dressed as the hunter and the other as the prey. After the boy killed his first whale, or his first enemy in war, he fasted for five days, then took a steam bath and feasted with the men of the village (Birket-Smith, 1953, p. 87).

As did the Aleuts, both the Koniags and Chugaches practiced transvestism; in fact, the custom was probably better known on Kodiak Island than anywhere else in Alaska (Langsdorff as cited in Hrdlicka, 1944, p. 74). A male child destined to be brought up as a female was selected by his parents shortly after birth, often because

his features resembled a girl's or because his parents were expecting a girl (Davydov as cited in Hrdlicka, 1944, p. 79; Lisiansky, 1814, p. 199). Other children were selected because their parents hoped they would become shamans (Gideon as cited in Black, 1977, p. 99).

A transvestite wore female clothes, was ornamented and tattooed in the female manner, and at the age of 15 or 16 was made available as a "wife" to a rich man (Choris as cited in VanStone, 1960, p. 105). Such people enjoyed considerable prestige in the community, especially since some were also shamans. A mother was proud to see her son *married* to a chief (Sauer, 1802, p. 176) and a man with such a *wife* considered himself lucky indeed (Davydov as cited in Hrdlicka, 1944, p. 79). A few transvestites adopted female dress rather late in life. These usually did not marry but accompanied hunters to be available for mending clothes and other female tasks (Merck, 1980, p. 105). Among the Chugaches, transvestites were less common. They usually performed the tasks of both men and women and did not marry (Oswalt, 1967, p. 202).

Old Age, Dying, and Death

The Koniags, like the Aleuts, often lived to a great age, sometimes to 100 years or more (Shelikhov, 1981, p. 55). They grew so old, according to one early observer that they could hardly walk under the burden of years (Merck, 1980, p. 107). Another remarked, however, that the elderly often performed the same duties as the young, and that even in old age they did not seem feeble (Davydov, 1977, p. 148).

They faced death quite dispassionately. They clothed the corpse in a new parka, painted the face, and adorned it with ornaments. Burial was in a round pit about three feet deep, lined with grass or hay. The body was laid in the pit on its side with the legs tightly flexed and draped with sealskins. The grave was then covered over with planks and the dead person's possessions laid on top (Merck, 1980, p. 107). A house in which an individual died was afterwards abandoned. Davydov (1977, p. 79) mentions a case he observed in which an elderly dying woman was placed in a hole dug in the floor and covered with boards, so that the house could be preserved from destruction after her death. The woman's cries could be heard for three days before she finally succumbed.

Traditional Medicine

Chugach burial customs dictated that the corpse of an ordinary person was wrapped in sealskin and left for several days in the main room of the house, where relatives sang and wept. There was no fear of touching a corpse, even that of a shaman, whose powers left him at the moment of death. Burial was at the place of death, following which everyone took a sweat bath.

A chief's body was wrapped in sea otter skins or in his personal armor. All his body ornaments were left in place and his remains were buried in an inaccessible spot, such as on the top of a rock pinnacle. His possessions were arranged neatly on either side of him (Birket-Smith, 1953, p. 88-9).

Causes of Disease

In the Koniag view, according to a fragment preserved by Father Gedeon (as cited in Pierce, 1978), "He who wishes to stay healthy and live long should first never sleep beyond dawn, refrain from womanizing and finally have as much exercise as possible" (p. 136).

The Chugaches believed that illness flew around in the air like evil spirits. When a child was sick, for example, the family could hear the whistling of the wind, the growling of a bear, or the hoot of an owl, each signifying that an evil spirit was abroad that night. A person with epilepsy was thought to be possessed by such a spirit. Illness could also be caused by a witch's soul entering the body of an enemy (Birket-Smith, 1953, p. 116).

Healers

Koniag shamans were usually but not always male (Merck, 1980, p. 107). Their special talents came to them early in life, sometimes in a dream (Lisiansky, 1814, p. 207). Some shamans were transvestites who were designated by their parents for this calling at birth. Such an individual, as he grew older, was apprenticed to an experienced shaman to learn the skills of his calling. Unlike most other transvestites, those who were shamans remained single (Gideon as cited in Black, 1977, p. 99).

The Koniags held their shamans in great veneration because of the importance of their principal functions, namely to predict the future, control the weather, and treat illness (Merck, 1980, p. 107). As a healer, a shaman was usually consulted only in dangerous cases that were beyond the powers of traditional remedies. If a shaman was successful in effecting a cure, he was richly rewarded, but received nothing if his efforts failed (Lisiansky, 1814, p. 208).

Traditional remedies were administered by another class of healers called *herbalists*, people in the community who had special skills not only in the use of medicinal plants but also in the techniques of surgery (Petroff, 1882, p. 143). Whether the same individual practiced both arts is unclear but it is certainly possible. Herbalists were usually women (Davydov, 1977, p. 177; Lisiansky, 1814, p. 185), although probably not exclusively so.

A Chugach shaman could also be either male or female; in fact a female shaman did not even lose her powers during menstruation. The calling was often passed from a father to his own child or to a nephew or niece. Usually a shaman acquired her of his powers when spirits appeared after the individual had wandered for days in lonely places. When the spirits spoke, the initiate would fall into a faint and be transported spiritually to the tops of the mountains or the depths of the sea, where the shaman's art would be learned. On occasion a shaman might acquire the special powers without being aware of the change, or as the result of a special event. In daily life a shaman wore ordinary clothing, but during a performance a special skin apron trimmed with puffin beaks was worn.

Another type of Chugach healer was called *iluliorte* or "one who makes whole." These individuals, usually women, employed several different techniques, such as drawing out the illness with their hands, sucking it out, or pressing their hands on the abdomen of the sufferer (Birket-Smith, 1953, p. 116). Family members also often used various medicinal plants in the treatment of minor illnesses or injuries.

Magico-Religious Healing

Koniag shamans wore no special clothing, but painted their faces in a distinctive manner and wore feathers in their hair (Merck, 1980, p. 107), or perhaps a wig adorned with feathers in the shape of horns (Lisiansky, 1814, p. 208). Sometimes they performed naked (Gideon as cited in Black, 1977, p. 99), or with their clothing backward (Lisiansky, 1814, p. 208). Some also used masks during their ritual performances (Lantis, 1947, p. 89).

The shaman communed with the spirits at a public ceremony. Standing opposite the individual seeking help, he stated the question to be solved. Then, according to Lisiansky (1814):

The company join in the song by degrees, till it comes to the chorus, or rather a yell. During this incantation the shaman makes the most frightful grimaces and twistings of the body, till at last he appears perfectly exhausted and falls to the ground. He falls, however, only to rise again; and he repeats this foolery several times before he gives the answer, which, in his trance, he pretends to have received from the evil spirit. (pp. 207-208)

The shaman used various tricks to heighten the effect; for example, breaking bladders filled with blood from his sleeve at the appropriate moment. After such an "operation" he would "heal" the wound and demonstrate no visible scar. If asked to perform something beyond his powers, the shaman might protest that he would bleed to death or suffer some other such calamity (Gideon as cited in Black, 1977, p. 99). Despite limitations of this kind, the Koniag had great faith in their shamans. When Shelikhov was asked to cure a man who was gravely ill, he offered to try "with the help of God." The Koniag replied scornfully that they had a shaman who once brought a dead man back to life and moreover had done it without outside help (Bancroft, 1886, P. 366n).

Among the Chugach a shaman was called in if the family thought that an illness was due to evil spirits. If such spirits were felt to be wandering abroad, the shaman might also be consulted to learn who might be the object of their flight. In his task the shaman called on his own friendly spirits for assistance. Working at night, he made contact with the spirit world by beating a drum, shaking rattles, speaking in a mysterious language, and finally by falling into a trance. Masks and dolls representing friendly spirits might also be employed for making contact with the other world. The spirits aided the shaman to do feats of magic, such as flying through the air, making the earth tremble, or taking the patient's pain into his own body and then dissipating it (Birket-Smith, 1953, pp. 126-128).

Empirico-Rational Healing

The Koniag used many plants medicinally, but unfortunately most cannot be identified with certainty today. Several different plants were employed to treat boils and other swellings of the skin. Hot parsley stalks were applied to boils to bring them to a head. *Taganak* and *kiuyiukhat* were two roots that were crushed and steamed on heated stones and then applied externally. Wood sorrel was crushed and brewed to be taken as either a sedative or an emetic. The raw roots of *chyvykhyat'* had both sedative properties and could be used to treat diarrhea, especially that brought on by overindulgence of raspberries. The crushed roots of *amagot'*, a plant growing on flat ocean beaches, were used for sore throat (Gideon as cited in Black 1977, p. 96; Gideon as cited in Pierce, 1978, pp. 129-130).

When boils were thought to have burst internally, the patient was given an infusion prepared from the shredded and boiled root of a plant called *chikinaliakhpik*. This medicine was said to be very bitter and unpleasant and not everyone could tolerate it (Gideon as cited in Pierce, 1978, p. 129). On one small island a plant called *shishkuk*, with a short stem and four or five leaves, was collected. The leaves were generally dried and smoked, but the plant in the form of an infusion was also given to women in labor (Davydov, 1977, p. 177). Several plant remedies gained some currency against venereal disease, which was probably introduced among the Koniag at an early date after European contact (Gideon as cited in Black, 1977, p. 96; Davydov, 1977, p. 177).

The Koniag also used several non-plant medicinal substances. For example, excessive bleeding might be stopped by the application of cold rocks, powdered rotten fir wood, or down. Raw flounder meat or clay was applied for more severe hemorrhage (Gideon as cited in Black, 1977, pp. 95-96).

Most of the available information on medicinal plants in use among the Chugach dates from the twentieth century. Devil's club, that ubiquitous pest of the Alaskan rain forest, was used in several ways: in particular, the ashes made from the bark of the plant were applied to burns but also used for other conditions, including dropsy. In the latter situation the patient was stood against a wall with his right foot drawn up and lashed to his buttock. The powdered ash was then applied to an incision made in the heel. The patient was required to maintain this uncomfortable position until morning. The ashes of the water lily were also applied to open wounds or to certain types of skin eruptions. This remedy was thought to be without effect, however, unless a gift offering was left at the site where the plants were gathered. Other plants applied externally included hot leaves for earache and hot pitch for frostbite and for open wounds. For boils they sprinkled on a powder made from the root of the northern yarrow.

Plant extracts were also taken internally. A decoction of high-bush cranberry leaves, for example, was used as a gargle for sore throats, and other decoctions made from monkeyflower, fireweed, wild rhubarb, and nettle roots were thought to help constipation. Fireweed was said to stimulate milk production and another plant of uncertain identity was administered for coughing up blood (Birket-Smith, 1953, p. 117).

The Koniag had perhaps the most highly developed surgical tradition of any of the Alaska Natives. Despite their crude instruments and their imperfect knowledge of anatomy, the Koniag seemed to have unusual ingenuity, skill, and courage in their surgical approach to disease and injury. Not infrequently the patient must have also displayed considerable courage and fortitude.

The incision and drainage of abscesses was accomplished by means of a sharp piece of shell or a hard, sharpened stone knife set in a wooden handle. For a superficial boil they simply lanced the skin to let out the pus, but for a deeper abscess or carbuncle, they thrust the knife deeply into the tissues, all the way to the handle, and twisted it about to break up the loculations of pus. "The pain produced by this action," wrote an early observer, with ample justification, "can well be imagined" (Davydov, 1977, p. 177). Initially the surgeon sucked out the pus, then allowed it to drain on its own.

The technique of bleeding was highly developed in Kodiak. Different parts of the body were incised, depending on the patient's symptoms and the supposed site of the disease. For example, bleeding from under the chin was used for shortness of breath, or perhaps asthma, while headache was treated by an incision through the scalp down to the bone just below the temple, on the side where the pain was more severe (Davydov, 1977, p. 178). For milder headaches the incision might be made in the arm (Gideon as cited in Black, 1977, p. 96). For throat infections a blood vessel under the tongue was opened, whereas for abdominal pain an arm or leg vein was used. When sufficient blood was thought to have flowed, the wound was staunched with down (Gedeon as cited in Pierce, 1978, p. 130). Another treatment for internal pains was bleeding from the groin region. General puffiness of the body called for deep incisions on the heels. To treat the pain and the nausea that sometimes resulted from this operation, the surgeon placed two cold stones between the patient's legs. When the heel wound began to mend, a strip of scalp was removed to renew the flow of blood (Gedeon as cited in Pierce, 1978, pp. 129-130). For backache two stone knives were attached to the lower back, on either side of the spine. The sufferer was then made to lie back on the knives and maintain that position until the blood stopped flowing (Davydov, 1977, p. 154).

The principle behind blood-letting was to remove the "bad blood" which was thought to cause the disease. Bad blood had a distinctive color which the surgeon could use to determine the patient's prognosis. The technique of bleeding involved making an incision in the skin over the vein, then stabilizing the vein by inserting a needle or piece of sharp bone beneath it. The vein was then opened by a piece of sharp shell (Davydov, 1977, p. 178). In 1805 Lisiansky (1814) had the opportunity to witness such a procedure being performed by a young woman:

She first transpierced the vein of the arm with a copper instrument, which was far from being sharp. As she did not succeed in drawing blood the first time, she repeated the operation, when the blood gushed out in a stream. (p. 185)

Although Lisiansky confessed to some squeamishness at the sight, he reported that the patient sat through the procedure with perfect composure, although he had never been bled before.

The Koniag set broken arms and legs and sutured large lacerations. For penetrating wounds caused by spears or arrows, they cut out the embedded projectile (Davydov, 1977, p. 178). On occasion they cut for urinary stone, but only with great reluctance. The story is told of an islander who suffered for a long time before an old man who could be found to perform the operation. The patient ultimately recovered completely, but only after a long and shaky convalescence (Davydov, 1977, p. 178). Another account relates that the surgeon sometimes removed small stones from the distal urethra by making a small incision in the penis with an ordinary knife (Gedeon as cited in Pierce, 1978, p. 129).

A rather grim operation was sometimes performed for eye disease. The surgeon pushed a thin piece of sharpened bear bone into both sides of the forehead just above the ends of the eyebrows. The spicules passed close to the eyeball and into the bridge of the nose. During the procedure the patient was given a fir cone to bite on to prevent him from biting off his tongue because of the pain (Gedeon as cited in Pierce, 1978, pp. 129-130).

Two witnesses describe a most unique operation for "cataracts," although in fact the condition in question is probably pterygium, in which a thin membrane grows over part of the cornea. Father Gideon (as cited in Black 1977) described the operation; "A live louse is fastened to a fine hair....[W]hen the insect is observed to have attached itself securely to the film that has formed in the eye, it is then yanked out" (p. 84). This process was repeated until the film was completely removed. Both Gideon and Davydov (1977), who described much the same operation, differing only in details, expressed skepticism about the plausibility of this procedure. Perhaps Davydov best summed up: "I leave everyone free to believe it or not" (p. 178).

Surgery among the Chugach seems to have been less highly developed, although this impression may simply have been due to their lack of early ethnographers. They did use piercing for the treatment of pleurisy, enlarged liver, dropsy, and rheumatism, and bleeding for sore eyes, headache, and other conditions. A diseased tooth was extracted with the help of a piece of tough sinew wrapped around it (Birket-Smith, 1953, p. 117).

Beyond surgery, diet and fasting played an important role in Koniag medicine just as with the Aleut. The first line of treatment in most illnesses was said to be to eat as little as possible (Davydov, 1977, p. 177). Even young boys and girls would refrain from eating fatty foods when they noticed a pimple on the body. Sometimes an exclusive diet of a small salt-water fish called *kayulyuk* was used for the treatment of internal boils and other illnesses (Gideon as cited in Black, 1977, p. 95).

Sweatbaths seem to have been used by the Koniag even prior to the arrival of the Russians, who introduced them in many parts of Alaska (Davydov as cited in Hrdlicka, 1944, p. 30). These were originally earthen structures built close to the home. Steam was produced by pouring water on hot stones carried from the kitchen (Sauer, 1972, p. 176). Although the Koniag loved their steambaths, they believed that an excess would make them die young, lose their sight, and grow feeble (Gedeon as cited in Pierce, 1978, p. 136).

In Prince William Sound a form of massage was used for problems such as backache. For rheumatism piercing might be combined with the sweatbath, during which the sufferer whipped the body with elder twigs (Birket-Smith, 1953, p. 117).

CHAPTER 3. THE ESKIMOS OF SOUTHWESTERN ALASKA

The Setting

The main body of Yupik-speaking Eskimos, called the Central Alaskan Yupik, in earlier times inhabited the southwestern part of Alaska from the upper Alaska Peninsula north to the southern and eastern shores of Norton Sound. This vast area included the shores and river valleys of Bristol Bay, the lower drainage of the Yukon and Kuskokwim Rivers, the adjacent Bering Sea coast, and Nunivak Island. Also considered here are the Eskimos of St. Lawrence Island, who belong to a group known as the Central Siberian Yupik.

For the most part the mainland region is flat and featureless tundra studded with countless ponds, lakes, and meandering sloughs. The only significant mountains are the southwest-trending Kuskokwims, which separate the Kuskokwim from the Nushagak River drainage. Smaller hills are found along the upper Nushagak and Togiak Rivers, north of the lower Yukon, and on the islands. The greater part of the region is underlain with permafrost.

The climate, although milder than that of the arctic tundra, is moderately cold in winter and cool in summer. Wind nearly constantly sweeps across the unobstructed landscape, adding a significant wind chill factor to the thermometer readings. The mean January temperature for Bethel is 5.1 degrees Fahrenheit, and the mean July temperature 54.7 degrees. The total annual precipitation there is less than 16 inches, with August the wettest month.

The tundra vegetation consists of grasses, sedge, moss, and lichens, liberally sprinkled in summer with countless small flowers. Dwarf willow and alder shrubs may be found on the tundra, but trees are absent. Further inland, along the river banks and in the hills, are forests of stunted spruce, alder, birch, and willow.

In earlier times caribou roamed through much of southwestern Alaska. Moose were scarce on the tundra but could be found in the wooded areas further inland. Other larger mammals then and now include brown and black bears, wolves, wolverines, beaver, river otter, and arctic and red fox. Among the smaller mammals are arctic and snowshoe hares, marten, mink, hoary marmots, and various voles and tundra mice. Marine mammals include harbor seals, the large and prized bearded seal, or *ugruk*, and the occasional ringed seal or ribbon seal. Northern fur seals are sometimes encountered in Bristol Bay and sea lions and belugas can be found all along the southern Bering Sea coast. Walrus are abundant around St. Lawrence Island and in times past were plentiful in some parts of Bristol Bay.

The rivers of Bristol Bay, including the Naknek, Kvichak, Nushagak, and Togiak, are the richest red salmon spawning grounds in the world, but also play host to kings, silvers, and pinks, as do the Yukon and Kuskokwim Rivers further north. Fresh-water fish of importance in the lakes and ponds are the various types of whitefish, sheefish, blackfish, tomcod, grayling, arctic cod, and stickleback.

The Yukon-Kuskokwim delta is also prime breeding habitat for countless waterfowl and shore birds. Several birds overwinter in the region, including the raven, snow bunting, snowy owl, and sometimes the Lapland longspur. Inland, the willow and rock ptarmigan and the spruce grouse are important sources of food. The birds of St. Lawrence Island tend to be those of the nearby Siberian mainland.

The Yupik of southwestern Alaska comprised some ten subgroups, with the people of St. Lawrence Island constituting an eleventh group (Oswalt, 1967, pp. 2-9). All the Eskimos of southwestern Alaska spoke a variety of Central Alaskan Yupik. Despite regional differences they could probably communicate intelligibly with each other, although the dialect of the Nunivak Islanders stood out somewhat from the others. The St. Lawrence Islanders, for their part, spoke a form of Yupik closely related to that of eastern Siberia (Woodbury, 1984, pp. 51, 52).

The Central Alaskan Yupik lived in two distinct ecological zones, the tundra and coastlines of the Bering Sea and the wooded valleys of the great river systems. The coastal Eskimos had a culture similar to that of the northern Alaskan Eskimos and were dependent largely on sea mammals, birds, and fish for subsistence. The riverine Eskimos, on the other hand, lived primarily from the salmon which ascended the rivers in great numbers every spring and summer to spawn, although they supplemented their diet with freshwater fish, caribou, moose, and smaller mammals. The Nunivak Islanders depended primarily on seal and walrus hunting, but also supplemented their diet with fish (Lantis, 1984b, pp. 213-214). Similarly, the St. Lawrence Islanders subsisted chiefly on walrus and seal, although they also hunted migrating whales.

The coastal people lived in relatively fixed villages during most of the year, but moved seasonally to fish camps along the rivers or to hunting camps on the tundra. The inland Eskimos, on the other hand, tended to remain in their larger villages along the rivers during the summer fish runs, and then to scatter to outlying hunting and trapping camps during the fall and winter months. Despite the differences in habitat of the two main groups, the cultural differences were minimal and each often pursued subsistence activities in the domain of the other. A lively trade was also carried on between them.

Winter houses were semi-subterranean, for greater insulation, and usually constructed of drift logs covered by sod. They were entered through a small anteroom leading to a subterranean passageway, and finally up through the floor to the main living area. The latter was furnished with wide sleeping or storage benches along three sides, with a stone hearth centrally located under a smoke hole in the roof (VanStone, 1984a, pp. 206-207). Some houses had as much as 250 square feet of floor space and might accommodate up to 18 people (Oswalt, 1967, p. 176). While at temporary camps, the people usually lived in skin tents.

Village life in fixed communities revolved around the men's house, *kashim* or sometimes called *kashgee*, a building substantially larger than the typical dwelling but constructed in much the same manner. The men and the older boys lived and slept in the *kashim*, leaving the main dwellings to the women and children most of the time. The

kashim had many uses. There the young men of the village learned subsistence techniques and how to fashion hunting and fishing implements. There the village elders passed on the intellectual culture to the young, as they told of myths and hunting exploits. The *kashim* was also the center of ceremonial life, where the shamans held their séances, performed traditional dancing, and demonstrated other skills (VanStone, 1984b, p. 233).

Yupik clothing was not only efficient and warm but also of considerable beauty. Parkas were usually made of caribou skin on the lower Yukon, but further south they were fashioned from the fur of small animals, such as the hoary marmot, mink, muskrat, and ground squirrel. Men's parkas were long, reaching to the knees or even to the ankles, with those of the women shorter and often split up the sides. The outside was decorated with marmot tails or whole ground squirrel skins. Beneath the parka both sexes wore belted fur trousers reaching to the knees. Mittens were usually made of animal fur, but lighter ones might be fashioned from fish skins or bird skins, often with liners of woven grass. Footwear included sealskin or fish-skin boots, with socks of woven grass (Oswalt, 1967, pp. 141-142). The St. Lawrence Islanders wore tight sealskin pants, a hoodless reindeer fur shirt, fur stockings, and sealskin boots. Bird-skin parkas were sometimes used in the winter months (Hughes, 1984, p. 252).

For transportation, the Yupik developed a rather heavy-framed kayak with a characteristic hole in the bow. Larger open skin boats, or *umiaks*, were used extensively for hunting by the St. Lawrence Islanders. In the upper river villages birch bark canoes were sometimes employed (VanStone, 1984b, p. 231), the design no doubt borrowed from the neighboring Athapaskans. Throughout the region the Eskimos used dog-teams for winter transportation.

The principal food resource for both major ecological regions of southwestern Alaska was salmon, which were taken with nets, basket-like traps, or spears. The coastal Eskimos also hunted caribou with bows and arrows or sometimes drove them off cliffs. They caught seals with nets, or by harpooning them in open water or at blow-holes in the ice. Smaller animals were taken in both regions with traps and snares. Various fresh water fish supplemented the diet throughout the year, particularly whitefish, sheefish, and tomcod. Nesting waterfowl provided not only food in the form of eggs and meat, but also abundant skins for use in making clothing (VanStone, 1984a, pp. 206-207). Salmon and other fish were preserved by drying and were usually eaten dipped in seal oil for flavor and moistening. Meats were generally boiled or roasted. Sometimes meat, fish, or fish eggs were buried and allowed to become putrid before being eaten.

For tools and weapons the Central Yupik used many types of solid materials, including ivory, wood, bone, antler, stone, and slate. Many objects showed not only great ingenuity and skill in manufacture, but also considerable artistic feeling. For flexible materials they employed skin, fur, split spruce roots, and tundra grasses, the last made into a variety of handsome baskets.

Central Alaskan Yupik religion is best known from studies carried out on Nunivak Island (Lantis, 1984b, pp. 220-221). The people had a rich ceremonial and spiritual life. Spirit powers were essential to human welfare. All animals had souls and some, especially those of sea mammals, could be reincarnated. They could also assume a

human form and speak to individuals. The world also included dwarfs, giants, and beings which were half human and half animal. Much ritual revolved around the use of charms and amulets and was performed to ensure success in the hunt or in other personal endeavors. On the mainland, dance festivals were prominent during the winter months, and are thought to have involved the propitiation of the dead and the revival of subsistence animals (VanStone, 1984b, p. 233). On St. Lawrence Island both personal and collective tasks were demanded of the people, again with primary emphasis on beseeching animal spirits to allow successful hunting (Hughes, 1984, p. 273). Elaborate whale ceremonies were held in the late winter and spring.

Health and the Stages of Life

Pregnancy, Childbirth, and Infant Care

To ensure an easy delivery, a Yupik woman had to obey many rules of behavior. For example, if she got up at night to urinate, she had to continue all the way through the passageway to the outside before turning back, a practice which has obvious symbolic meaning (Lantis, 1959, p. 31). She had to keep both arms in her parka at all times and could not chew spruce gum, lest the placenta become adherent. A pregnant woman would risk a sickly infant if she ate leftovers or got up from the meal without keeping some food in her mouth (Oswalt, 1963b, p. 29). Although pregnant women were expected to work less hard (Lantis, 1946, p. 223), Zagoskin (1967, 223) saw an expectant mother assiduously chopping wood in the belief that it would facilitate her delivery.

The Yupik did not use a separate birth hut (Oswalt, 1963b, p. 134). The woman in labor was attended by her mother or an older woman from the village. At the time of delivery, she normally lay on her left side with her left elbow pressing into the abdomen, her left leg straight and right flexed at the hip and knee. Other positions were also employed, including kneeling, squatting, sitting, or lying on the back. The birth process was not forced in any way unless the labor was long and difficult. The woman herself might strain against a hard object at her back to help her push more effectively (Lantis, 1946, p. 223; 1959, pp. 221-3).

Immediately after birth of the infant and the placenta, the attendant cut the cord with a stone knife and tied it with sinew. She then applied seal oil or ashes to the stump and covered it with a soft skin. The placenta was then buried, but the cord was dried and saved as an amulet for the child. As soon as the delivery was completed, the infant was put to the breast and not long after was washed with water. The mother was expected to lie on her side after delivery and keep her legs straight for four or five days. After her first baby she was not permitted to eat raw food and her urine had to be promptly removed from the house, lest it impair the child's future powers. As soon as the mother was permitted to sit up again, she often began sewing a rabbit or fox skin parka for the infant (Lantis, 1959, pp. 31-35).

A woman with her first child was not permitted to suckle her infant while wearing a parka, even outdoors, nor was she allowed to nurse while lying down. The child was breast-fed for three or four years if the milk flow continued (Lantis, 1959, pp. 31-36). Dr. Edmonds (1966, p. 26) wrote that around St. Michael young mothers had

"splendidly developed busts," but that with increasing family their breasts became so pendulous that some women could nurse their children by throwing the breast over the shoulder, where the infant was usually carried in the parka.

A male infant would not be given water unless his mouth and throat were parched and he could only spit white foam. This practice was meant to teach him to go without water and thus not sweat or become bloated. The earliest solid food given was usually pre-masticated fish liver, dried fish, or perhaps fish soup. Later seal oil, *agutuk* (i.e., seal oil, berries, and snow), or other soft food supplemented the breast milk (Lantis, 1959, pp. 31-33).

Diapers were fashioned out of dried sphagnum moss placed over a piece of cured sealskin or a section of sea mammal stomach. The infant sat on the moss, which was changed as it became soiled. The mother tried to anticipate the child's need to urinate and held it away from the bed and over a wooden urine tube (Lantis, 1959, pp. 32, 35).

Small children were treated indulgently by their parents (Oswalt, 1967, p. 195), but as they grew older they were expected to meet certain norms of behavior. Minor breaches of discipline were handled by the mother and the more serious ones by the father (Oswalt, 1963b, p. 31). Certain habits were instilled early, such as not sharing utensils, and getting by with as little water and sleep as possible (Lantis, 1959, p. 29).

The harsh realities of life sometimes resulted in infanticide among the Yupik, just as in most other parts of Alaska. The infant's death usually took place within a few days of birth and was most commonly by exposure, although smothering or drowning sometimes occurred (Oswalt, 1967, p. 194). Occasionally, when the mother of an infant girl died, the child would be buried alive with her mother. If the infant was a boy some attempt might be made to find him a home. In times of extreme hardship an older child might be allowed to die, especially if sickly (Jackson, 1896, p. 1459). Girls more often suffered this melancholy fate than boys, especially if the child's mother had died during the winter months. An older girl, however, might also be taken into another household as a drudge (Oswalt, 1963, p. 137).

Ornamentation

The Central Alaskan Yupik wore much less elaborate ornaments than their neighbors to the south, but the decorations followed much the same general pattern, namely labrets, nasal ornaments, ear ornaments, and tattoos. In historical times they wore rather simple labrets near the corners of the mouth. Near Cape Newenham, one of Cook's officers described two labrets on the same side of the mouth, with the second one in a perforation lateral to the first (Ellis, 1782, p. 1:308). Other patterns observed in the early years of contact included three holes in the lower lip (Khromchenko, 1973, p. 60), and slits in the lower lip (Glazunov as cited in VanStone, 1959) which were sometimes empty and sometimes contained an ornament. Labrets were usually made of bone, shell, stone, or sky blue glass beads (Khromchenko 1973, p. 53). Sometimes beads and other small objects were suspended from the

labret, especially in women (Zagoskin, 1967, p. 211). How and when these perforations were made is unclear. Oswalt (1967, p. 199) thought they were usually made in infancy or at puberty but that the operation was rarely ritualized. Lantis (1959, p. 32), on the other hand, described them as being performed in women immediately after childbirth.

Early explorers noted a pierced nasal septum in the people from Bristol Bay to Norton Sound, but not on St. Lawrence Island (Khromchenko, 1973, pp. 48, 53, 60). Sometimes the women wore a blue glass bead in the septum, or two beads suspended from a piece of sinew (Oswalt, 1963a, p. 27; Zagorskin, 1967, p. 211). On Nunivak Island a similar ornament was worn by the men (Lantis, 1946, p. 225). Somewhat later Nelson (1899, p. 52) recorded that the septum of a young woman was pierced in early childhood. In youth she wore one or two glass beads in the perforation but dispensed with them at the time of maturity. In later life she sometimes used the perforation to store needles and other small objects.

Early descriptions of ear ornaments are scarce. Slits were sometimes made in the ear lobes to accommodate bone ornaments, beads, or small thongs (Khromchenko, 1973, pp. 63, 72). Both men and women also perforated the outer rim of their ears for many types of decoration, usually with ivory or beadwork. Sometimes the ear decorations were very large and heavy and might include a string of beads extending from one ear to the other under the chin (Nelson, 1899, pp. 52-53).

Tattooing was not a prominent form of ornamentation among the Yupik-speaking peoples except for those on St. Lawrence Island, where it reached a high artistic standard. On the mainland the most common pattern in women consisted of two parallel lines extending from the corners of the mouth to the lower surface of the jaw. Men rarely wore tattoos, except perhaps on the wrist (Nelson, 1899, p. 50; Zagorskin, 1967, p. 211). Although tattooing was not used as a cure, as in some other groups, adolescent girls of the Yukon-Kuskokwim delta were sometimes tattooed on the outside of the wrist, the inside of the knees, the instep, and on the temple and chin to prevent headaches and stiffness of the joints (Lantis, 1946, p. 202; 1959, p. 30). On St. Lawrence Island women wore elaborate tattoos on the chin, cheeks, forearms, and wrists (Nelson, 1899, p. 51). The designs were applied by the mother when the girl was about nine years old. The basic patterns were stereotyped but special designs might also be used to commemorate important family events (Doty, 1900, p. 208). The usual Yupik technique for tattooing women was to draw a sooty human hair under the skin with a needle. Curiously, men used the pricking method for their tattoos (Lantis, 1959, p. 30). On St. Lawrence Island the tattoo was applied by scratching the skin with a sharp object and rubbing in a mixture of seal oil and soot (Doty, 1900, p. 213).

Maturation

A Yupik adolescent girl was considered unclean for 40 days after her first menstrual period, during which time she was secluded in a corner of the dwelling with her face to the wall and a parka hood over her head. During the summer months she might be permitted to spend her time of seclusion in a rough shelter away from the main house,

but in either case she could not go out during the day and only once each night. At the end of the 40 days she bathed, put on new garments, and henceforth was eligible for marriage (Nelson, 1899, p. 291).

Many restrictions were imposed on the girl at menarche. She was expected to work quietly and industriously during her seclusion on such tasks as weaving baskets, sewing boots, or other practical activities that prepared her for adult responsibilities. During the first ten days she was given no water to drink and could not eat fresh fish, or pick up food with her hands. After this initial period she still could not dip water but had to drink through a tube, usually made from the wing bone of a bird. Her boots were taken away and a belt was tied around her hips with a piece of fish hanging from one side and a little sack full of ashes from the other. When she was finally permitted to go outside she had to wear her boots and her hood up at all times to shade her eyes. These practices had the dual purpose of protecting the community from the girl's "uncleanness" and protecting her in turn from supernatural powers. During subsequent menses, a woman observed many of the same restrictions, such as not touching water or the ground directly, and shading her eyes from the sun (Lantis, 1959, p. 30).

Boys also had to observe certain rituals when they reached adolescence. The most important ceremonies were when he killed his first animal of each major species. His parents held a feast in his honor, during which an old man cut up the meat and distributed it to the guests without leaving any for the boy (Lantis, 1947, p. 5).

Old Age, Dying, and Death

Because of the uncertain conditions for survival, not many lived to an advanced age. Nelson (1899, p. 29) attributed this lack of longevity to the constant wetting and exposure to which they were subjected. Hrdlicka's (1931, p. 132) examination of old burial sites along the Kuskokwim revealed only a few remains of elderly people. Later in the nineteenth century a population study showed that less than one percent of the population were 65 or older, but by this time the effects of introduced diseases could not be discounted (U.S. Dep. Interior, 1893, p. 175). Whatever chronological age the people reached, the hard struggle for existence took its toll on their appearance, especially that of the women. Zagoskin (1967, p. 108) found it rare that a woman of 25 did not take on the appearance of an old woman.

When an individual did attain an advanced age, he or she was usually treated with kindness and respect, although there are some contrary views (Bruce, 1894, p. 112; Edmonds, 1966, p. 70). One of the motives for treating children indulgently in their younger years was to encourage them to treat their parents well in old age (Oswalt, 1963a, p. 143). Senilicide was not normally practiced, although Zagoskin (1967, p. 109) mentioned that sometimes a hopelessly ill person would be dressed in her or his best clothes and taken to an empty summer hut, where he or she was allowed to starve.

Death customs varied among these people. Along the Kuskokwim, relatives and friends gathered together after a death and the women wailed in mourning. They laid the body in a flexed position, with the knees against the

chest and the wrists fastened to the ankles. The deceased was then washed, rolled onto grass matting and removed through a side wall of the house, or if in the *kashgee*, through the smoke hole, in order to confuse the dead's spirit. Four men carried the body to the burial ground, where it was placed in a short wooden coffin with the personal possessions of the deceased placed on the lid or on the ground nearby. Women had much the same type of funeral, if less elaborate, but the bodies of infants might simply be deposited on the ground. The dead man's spirit was thought to linger for four days and a woman's for five, during which time the living took special precautions to avoid attracting attention (Oswalt, 1963a, p. 143-144).

In 1847 Father Netsvetov (1984, p. 56) observed a ceremonial for the dead on the lower Yukon. It began with feasting and distributing gifts. The kinsmen donned their finest clothing and went first to the *kashgee*, then emerged and marched slowly to the cemetery, led by a man with a drum. Behind a second drummer came many other people. At the graveyard they marched around solemnly and finally each person stopped before the grave of his own kinsmen and began to lament, to the accompaniment of singing and drumming. They then returned to the *kashgee* where they had a dance and entertainment.

On St. Lawrence Island a dying person was taken out of the house and placed in a summer tent, where he or she was laid on a bed of furs. All of the friends and relatives then wailed in anticipatory grief, but after the death actually occurred, there was little sign of emotion (Bruce, 1894, p. 116; Gambell, 1898, p. 144). The body was wrapped in seal or walrus skin and placed, together with a few small possessions, on a frame of logs on a hill, with stones or logs piled on top. No member of the family ever subsequently visited the grave (Bruce 1894, p. 116; Holmes, 1909, p. 271).

Beliefs about death along the Kuskokwim included the notion that a person who died a violent death, such as by murder, suicide, or even in childbirth, had a pleasant life thereafter. On the other hand, an individual who died of old age or from a wasting illness had a rather dull afterlife to contemplate---neither rewarding nor punishing. The soul went under the ground to a dark, dreary world or up to the sky until reborn (Lantis, 1959, p. 3).

Traditional Medicine

Causes of Illness

Although the Yupik believed that some illnesses were due to natural causes, an unexpected illness or death was usually attributed to the hostile act of a shaman. The latter could produce harm in several ways: for instance, the shaman could manipulate the weather, thus causing victims to freeze to death or perhaps drown in a kayak accident (Jackson, 1896, p.1459). The shaman might, on the other hand, steal the victim's soul and cause the individual to pine away and die unless the soul could be recovered, possibly by another shaman (Nelson, 1899, p. 422). A hostile shaman might also help an evil spirit gain possession of a victim's body, or perhaps cast a foreign object into the person causing pain, convulsions, or insanity (Edmonds, 1966, p. 71; Romig 1962).

Healers

The shaman was the most prominent and often the wealthiest individual in the community because of her or his powers not only over the destiny of people but also over the prosperity of the village itself. The ability to commune with the spirits involved the shaman in such matters as weather forecasting, the success of the hunt, leading the great ceremonial festivals, and, of course, the curing of the sick.

Shamans could be male or female, although the latter were less common and considered to be less powerful (Oswalt, 1963a, p. 86). On Nunivak Island the female shamans were primarily healers. Traditionally, a shaman was the daughter or son of a shaman. Such a child was often lonely and introspective and rejected by peers. At an early age he or she began to have disturbing dreams and to encounter spirits while alone out on the tundra. These activities took their toll on the child's physical health and before long some of the older people recognized that the child was destined to be a shaman. They might then give the young person a drum and begin to assist in vocational development (Lantis, 1946, p. 200). Once a child had demonstrated a propensity toward the work, there was an apprenticeship to a practicing shaman, who taught the necessary skills and knowledge as they worked and travelled together (Oswalt, 1963a, p. 87). It is likely that the parents, if they were shamans, also assisted in the training (Lantis, 1946, p. 200). Occasionally, it was reported from St. Lawrence Island, a person became a shaman later in life, after seeing the spirits of the dead wandering abroad at night (Doty, 1900, p. 221).

Shamans wore no distinctive clothing or badge of office, although a few were handsomely dressed because of their wealth. Dr. Edmonds (1966, 40, pp. 95-96) became acquainted with two itinerant shamans at St. Michael who were lavishly attired to underscore their status and renown. All shamans allowed their hair to grow long (Oswalt, 1963a, p. 90).

Despite the wealth of some, there were others who worked most of the time as hunters and fishermen alongside their neighbors (Zagoskin, 1967, p. 121). A few were too sick or crippled to be effective hunters and depended wholly on their spiritual powers. The shaman's special position, however, gave privileges denied to others. For example, he might take a pubescent girl as his wife against the expressed wishes of her parents. The shaman could, in fact, take nearly anything of value which was coveted (Oswalt, 1963a, p. 86). A visiting shaman might be offered by his host his own daughter, the wife of a friend, or even his own wife as a companion for the night (Edmonds, 1966, p. 68).

Despite these apparent advantages, however, to be a shaman was a game with high stakes. If the shaman failed to deliver on a promised cure, he or she would at the least not be paid, and sometimes might be banished or even killed (Edmonds, 1966, pp. 96-97). If one was suspected of causing sickness by means of sorcery, the shaman could suffer a grisly fate. One woman shaman from the Kuskokwim was said to have been pounded to death by her

husband, who then cut her body into small pieces, soaked them in oil, and burned them in the fire (Jackson, 1893, p. 1290). Often a near relative was deputized by the community to execute a sorcerer so that blood revenge could be avoided (Oswalt, 1963a, p. 143).

Whereas the shamans usually dealt with the more serious illnesses, there were also experienced persons in the community who dealt empirically with illness and injury. Women often became skilled in the use of plant and animal substances for the treatment of minor cuts and bruises, aching joints, or sore throats. Surgical procedures were more likely to be performed by older men (Lantis, 1959, p. 3).

Magico-Religious Healing

One important method of shamanistic healing in this area was the removal of an intruded *object* thought to be the cause of a localized pain or inflammation. Zagoskin (1967) has left a graphic description of such a ceremony performed by an old female shaman assisted by four others. The patient was suffering from low back pain and a cold:

Behind [the patient] can be seen the disheveled head of an old woman: she is cawing like a crow, nodding at the back of the sick man, and conferring with somebody or other. When she runs into difficulties or sees that she is not meeting with success she changes her voice, chatters like a magpie, barks like a dog, and, finally, she sets to howling like a wolf and attacking the sick man as though she were biting at his back. She seems to tear something out of him and throw it into the air. The drums beat louder. (p. 226)

On Nunivak Island the shaman, often a woman, worked over the patient while someone else drummed. She sometimes used a specially prepared cormorant feather to pretend to cut the skin over the site of the pain, after which she sucked the offending *object* out, then swallowed it, or threw it to the dogs or into the fire. On occasion the spirits would cause her to convulse such that the onlookers had to restrain her from harm. The whole performance was accompanied by drumming, chanting, and dancing, gradually building up to a dramatic climax (Lantis, 1946, pp. 200-202).

Amulets of stone or leather were also important adjuncts to healing. Shamans often presented them to newborn babies, who were expected to wear them around the neck, keep them tied to a wrist or ankle, or perhaps fastened around the waist (Doty 1900, p. 200; Zagoskin, 1967, p. 109). Jacobsen (1977, p. 127) observed a shamanistic healing ceremony that involved a child's nephrite amulet. The shaman took the stone, wrapped it in a piece of skin, then pretended to bend it and straighten it again by magical means. This sleight-of-hand convinced the family that the child would recover.

Another type of shamanistic healing was exorcism, in which the offending spirit was identified and persuaded to come out of the victim's body. One such episode, which also shows some aspects of object removal, occurred at the

Holy Cross mission on the lower Yukon, the description to follow based on the account of children who had observed it (Calasanctius, 1947):

To exorcise the evil spirit, the medicine man calls, screams incomprehensible words, blows hard on the spot where the pain is localized, then checks his breathing, then spits out of his mouth a pebble. He finally makes magic signs, dances, contorts his body, as a mark of joy that the evil spirit has been expelled. (p. 332)

Sometimes the shaman did not remove the offending spirit but was able to appease its wrath and persuade it to come out of its own accord (Romig, 1962, p. 85).

Empirico-Rational Healing

Because the tundra was covered with snow for much of the year, the Yupik did not make extensive use of medicinal plants. Netsvetov (1984, p. 69) in fact, stated in 1847 that the people of the lower Yukon had no other form of healing besides shamanism. Yet one of the earliest ethnographers pointed out in 1839 that the Kuskokwim Eskimos had shamans and old women who knew of many such remedies (Wrangell 1970, p. 19).

Artemisia tilesii, known locally as "stinkweed", was a versatile plant with many medicinal uses. Internally, it was used for gas pains, as a laxative, or as a general tonic. It could be applied externally to an aching joint, or to a fresh cut to stop bleeding. Inhaling the vapors from the boiled plant were said to relieve lung congestion (Ager & Ager, 1980, p. 38; Lantis, 1959, p. 5). The leaves and bark of the "ptarmigan willow" (*Salix planifolia*) and related species, said to be rich in vitamin C (Ager & Ager, 1980, pp. 34-35), were mixed with seal oil and eaten in the spring. The leaves themselves were sometimes chewed to relieve a sore mouth, and a poultice made from the shredded inner bark was used on open sores (Oswalt, 1957, p. 30). This plant contains a form of salicylic acid, which is closely related to aspirin (Lantis, 1959, p. 5). Alder leaves (*Alnus crisma*) were applied as a poultice on sores and wounds. The poultice stuck to the tissue and when pulled off helped to debride the necrotic material (Ager & Ager, 1980, p. 35). Berries were an important source of vitamin C in the diet. Cranberry juice was helpful for its astringent qualities when applied to the eye in snow blindness (Lantis, 1959, p. 6). On the Kuskokwim red bilberry juice was a general remedy for sickness, although Zagoskin (1967, p. 256) thought that larger doses were harmful.

Many other plants were employed internally for such conditions as constipation, upset stomach, or as tonics. They were usually taken in the form of an infusion, or tea (Ager & Ager, 1980; Lantis, 1958; 1959; Young & Hall, 1969). Fungi of various kinds were also collected for their medicinal value. One type (*Formes* spp.) growing on dead trees was boiled as a remedy for stomach disorders (Ager & Ager, 1980, p. 33). Various "puffballs" were crushed and applied to cuts, bruises and burns (Lantis, 1959, p. 6). The so-called "arctic kidney lichen," when boiled in water, made a powerful tonic (Oswalt, 1957, p. 30). A certain spongy type of moss was

sometimes eaten raw to control postpartum hemorrhage. When soaked in seal oil it could serve as an effective dressing for wounds (Ager & Ager, 1980, p. 331).

Besides plants, certain substances of animal origin were used medicinally. Human urine was applied to cuts to stop bleeding and to open sores to promote healing. In more severe wounds the whole extremity might be plunged into a tub of urine. Blood, usually from the nose, was sometimes allowed to drip into a child's mouth for the treatment of sores. Human milk found some use as a remedy for snow blindness, as did urine and saliva. On Nunivak Island, nasal mucus and seal blood were applied to fresh burns (Lantis, 1946, p. 202; 1959, p. 8). Rancid seal oil was a common remedy for sores, and when mixed with moss, it made an effective packing for deep cuts, although some preferred fox grease. Warm seal or fish oil dropped in the ear was a widespread treatment for earache. Seal oil also made an effective laxative (Lantis, 1959, pp. 8-9). The perineal glands of the beaver were thought to have special healing properties, and were used in the treatment of rheumatism, wounds, spitting of blood, and chest pain (Wrangell, 1970, p. 19). When chewed, the glands were helpful in sore throats, as was dried weasel meat (Lantis, 1959, p. 9). Animal organs or fish milt were considered a good tonic for old age (Anderson, E. G., 1942, p. 78). External application of fresh raw liver was used for frostbite, as was otter dung for scabs and rashes (Zagoskin, 1967, p. 110).

Mineral substances for healing included lime from burned shells and ashes from a squirrel's tail applied to mouth sores. Burned animal hair might also be sprinkled on open wounds. After childbirth, ashes were usually applied to the umbilical stump (Lantis, 1959, p. 9; Vasil'ev as cited in Zagoskin, 1967, p. 110).

Surgery was not highly developed among the Yupik, at least in comparison with their neighbors to the south. Such procedures as they used were performed most often by older men in the community who were experienced in the art, although shamans probably also took up the lancet and knife on occasion (Lantis, 1959, p. 3). Some types of surgical intervention, such as lancing an abscess, had obvious empirical value while others, such as bleeding or piercing, were based on the more theoretical idea that pain, throbbing, and swelling might be relieved by puncturing.

The techniques of bleeding and piercing are difficult to distinguish clearly in this region. The earliest description is by Vasil'ev (as cited in Zagoskin, 1967, p. 110) who observed a shaman treat a case of markedly swollen testicles by an incision in the scrotum. Zagoskin (1967, p. 256) himself also described a case of chest pain treated by repeatedly pricking the overlying skin with a sharpened nail. For joint pains the Nunivak Islanders often pierced a fold of skin near the joint, but away from the joint cavity itself. A similar technique was used on the mainland for backache. For snowblindness the Kuskokwim Eskimos everted the upper lid and made a small incision in the tarsal plate (Lantis, 1959, pp. 11, 25). Blood-letting was performed with caution and some reluctance because the people feared that the soul might flow out with the blood (Lantis, 1958, pp. 142-3). For this reason a specific vein was rarely opened. Usually a small stone knife was used to pierce the skin in the appropriate area, and after the blood had flowed for a few moments, the edges of the skin were held together until the bleeding stopped. Perhaps the principal reason for bleeding was the treatment of headache. Here a stone knife

was inserted in the skin of the temple, then worked sideways under the skin, perhaps to find a small vein. Another technique was to make a long incision in the sagittal plane above the hairline (Lantis, 1959, pp. 22-23).

On Nunivak Island, and presumably elsewhere, deep cuts were sutured with human hair. Projectile wounds, on the other hand, were usually left open (Lantis, 1959, p. 19). Amputations were performed when necessity demanded, such as after frostbite or a severe injury. At St. Michael a physician watched a shaman amputate a finger that had been crushed in a block and tackle. Although of course no anesthetic was used, the injured man was said to have watched the proceedings with interest and then returned to work with his good hand, showing his stump gleefully to his friends (Edmonds, 1966, p. 28-29).

Fractures were treated by placing sticks around the injured site and tying them in place with thongs (Anderson, E. G., 1942, p. 78). On Nunivak Island a piece of tough skin wrapped around the site served as a "cast" (Lantis, 1946, p. 202).

Finally, the use of heat and cold for treatment should be mentioned. Heat was thought helpful for arthritis. Simply sitting close to the fire was considered useful, or else a hot stone or hot ashes were wrapped in a damp cloth and then rubbed over the affected area (Lantis, 1959, p. 10). On Nunivak Island, however, the people were wary of excess heat, and rarely used it, since they thought it drove the cold inward. Thus a person suffering from near drowning or hypothermia had his clothes removed and was kept outdoors. More rational, perhaps, was the use of snow placed in the mouth to stop nosebleed, or the application of cold rocks to the head to relieve headache (Lantis, 1946, p. 202).

CHAPTER 4. THE ESKIMOS OF NORTHERN ALASKA

The Setting

The home of the North Alaska, or Inupiaq-speaking, Eskimos extends from the northern shores of Norton Sound to Demarcation Point on the Canadian border. It includes the northern coast of the Seward Peninsula, the coastal tundra of the Chukchi Sea and the Arctic Ocean, the drainage of the Kobuk and Noatak Rivers, and the greater part of the vast North Slope extending from the Brooks Range northward to the sea. Much of the land is low and without distinguishing features, particularly along the northern coastline of the continent. The coastline itself is relatively straight, with shallow offshore waters and few natural harbors. The interior of the Seward Peninsula is mountainous, with peaks ranging up to 4,000 feet in altitude. Further north, the Baird and Schwatka Mountains separate the Kobuk and Noatak River drainages and reach up to 6,000 feet, while the De Long Mountains north of the Noatak rise to a height of 5,000 feet. The great Brooks Range itself forms the southern boundary of Eskimo country in central Alaska, with the village of Anaktuvuk Pass surrounded by mountain peaks up to 7,400 feet.

The climate of the Bering and Chukchi Sea littoral is characterized by short, cool summers and long, stormy winters. Mean temperatures at Nome are 6.0 degrees Fahrenheit in January and 50.1 degrees in July. Annual precipitation ranges between 10 and 20 inches, half of it falling from July through September. The north coast, on the other hand, has a truly arctic climate, with mean January temperatures at Barrow of -14.7 degrees and July temperatures of only 38.7 degrees. Precipitation is less than five inches annually, nearly 40% of it falling in July and August. Snow may fall in any month and most of it lasts until the following summer. Nearly all the subsurface land is permanently frozen, often to a depth of 2,000 feet or more.

Coastal vegetation is typical arctic tundra consisting primarily of sedges, mosses, cotton grass, and lousewort. At higher elevations the so-called alpine tundra predominates, with lichens, grasses, and saxifrage, in addition to sedges. Willow and alder are widespread in the flood plains, and dwarf birch and willows in the plateaus and foothills.

By far the most important land animal is the Barren Ground caribou, which is found in great migrating herds not only in the foothills of the Brooks Range, but in earlier times also in the Noatak valley and the tundra around the shores of Kotzebue Sound. Other large animals hunted in the region once included moose, Dall sheep, and musk-ox, the last now extinct in the wild in Alaska. The grizzly bear still ranges widely, as do the tundra wolf, wolverine, and the red and arctic fox. A few animals have a more limited distribution; for example, the hoary marmot is found in the Brooks Range but not on the lower North Slope.

Sea mammals have always had great significance for the people of this region. Various species of seals are abundant, including moderate numbers of the highly prized bearded seal. The Pacific walrus ranges along the Chukchi and Bering Sea coast, and beluga are widespread. The great bowhead whale migrates through the Bering

Strait every spring, and the polar bear, which spends most of its life on the ice floes, ranges as far south as the Bering Strait.

Many types of waterfowl breed in the region, such as eider ducks, pintails, scoters, whistling swans, Canada geese, and black brant. Other abundant water birds include glaucous and mew gulls, jaegers, arctic terns, guillemots, loons, and many shore birds. Willow and rock ptarmigan, various owls, and the ubiquitous raven are the only common wintering birds on land.

The only numerous species of salmon is the chum, which breeds in the rivers emptying into Kotzebue Sound. The main subsistence fish used in the region are the tomcod, sheefish, various types of whitefish, blackfish, grayling, arctic char, and two varieties of stickleback.

The origins of the northern Eskimos are complex and controversial. Many archeological sites have been excavated in the region, some dating from nearly 8,000 years ago. Several of the early cultures had features in common with the modern Eskimos, but none could be called their direct ancestors until the so-called Western Thule people arrived between 1000 and 1250 A.D. (Anderson, D. D., 1984, p. 192).

According to Oswalt (1967, pp. 2-9), the Inupiaq-speaking Eskimos of Alaska were divided into eight subgroups, making up about 6,300 persons at the time of first contact. Of these the largest were the Tareumiut and the Nunamiut, who inhabited the northern coast and the Colville River drainage respectively. In modern usage, the northern Eskimos may be conveniently divided into simply the North Alaska Coast Eskimos, the Interior North Alaska Eskimos, the Bering Strait Eskimos, and the Kotzebue Sound Eskimos (Sturtevant, 1984). In the following discussions, cultural traits of the North Coast and Interior Eskimos will be stressed, with local variations brought in as appropriate.

The northern Eskimos, except for the nomads of the interior, lived in permanent communities, although they spent a variable part of each year visiting or traveling to and from their traditional hunting or fishing grounds. Each village consisted of several substantial dwellings, some interconnecting by tunnels, and one or more *karigis* (*kashims*).

The winter houses of the North Coast Eskimos were constructed from blocks of sod covering an excavated area, with the roof supported by driftwood timbers or whale ribs. They were entered through a downward-sloping passageway, off which were storage rooms and a cooking space. The main room, about 12 feet square, was entered through a well from the passageway, opposite which was a sleeping bench. Along the other two side walls were drying racks and stone lamps for heat. A skylight, covered with *ugruk* or walrus gut, and a ventilating hole were located in the central part of the roof (Spencer, 1959, pp. 49-51). In Kotzebue Sound the winter house had a central hearth and sleeping alcoves off the sides of the main room (Burch, 1984, pp. 307-308). The Interior Eskimos used a characteristic dwelling called an *iccellik*, a portable tent-like structure built over a willow frame

and banked with sod (Spencer, 1959, p. 44). In the summer months the northern Alaskan Eskimos generally lived in dome-shaped or teepee-like tents made from sealskin or caribou skin stretched over a willow frame. Along the rivers, such frames were sometimes covered with bark, moss, or grass instead of skins (Burch, 1984, p. 307). The *kariai*, or men's house, was larger than an ordinary dwelling but built on much the same plan. Some larger villages had three or more of these buildings, each one associated with an important man in the village, usually a whaling captain (Ray, D. J., 1975, p. 286). This man and his friends and relatives spent the greater part of their time in the *kariai* where they talked together, made weapons and tools, and passed on the essential points of the culture to the older boys.

The clothing of the North Alaska Eskimos afforded excellent protection against the severe arctic climate. Both men and women wore trousers variously made of caribou, seal, or even dog skin. Over this they put on a hooded caribou skin parka reaching just below the hips and worn loose enough to allow the arms to be brought inside, or a baby to be carried on the back (Spencer, 1984, p. 329). Boots were usually made of bearded seal skin and were insulated with grass or baleen shavings. Winter mittens were fashioned from polar bear, or perhaps dog fur. In the summer they wore a hip-length hooded rain parka made from sewn strips of seal intestine. Most articles of clothing were ornamented with decorative panels or strips of fur. The Inland Eskimos used caribou skin for nearly every article of clothing, including boots, trousers, and parkas, although the ruff of the latter was trimmed with wolverine fur to prevent frosting (Oswalt, 1967, pp. 137-141).

As weapons the northern Eskimos used harpoons, bows and arrows, bird darts hurled from a throwing board, and bolas for catching birds on the wing. Such weapons were crafted with great care from wood, ivory, stone, and sinew. Rawhide nets were sometimes employed for seal hunting. For hunting land mammals the people in addition made use of snares, deadfalls, and pits.

All the coastal Eskimos built graceful and lithe kayaks, although the exact design differed from place to place. Their kayaks were of the single-holed type, consisting of a driftwood frame covered with scraped sealskin. These craft were employed by the Bering Strait Eskimos for salmon fishing and hunting seals, and by the King Islanders even for walrus hunting (Ray, D. J., 1984, pp. 289-290). Further north the *umiak* was increasingly important both for hunting and for bulk transportation. This large boat had no deck and was usually covered with the skin of bearded seals or sometimes walrus. Some umiaks were up to 50 feet in length and could accommodate many people, along with much bulk freight (Burch, 1984, p. 311). On the northern coast a smaller umiak-type craft was utilized for whale hunting, each carrying a crew of 6 to 12 men (Spencer, 1984, pp. 329-330). On the inland waterways the Eskimos often traveled by a kind of wooden canoe (Burch, 1984, p. 311).

In the winter dog sleds became the chief means of transportation. These had several designs, and were drawn by anywhere from one to ten dogs, depending on the size of the sled and the wealth of its owner. The more inland Eskimos used a kind of snowshoe in deep snow.

Three principal subsistence patterns were known among the Eskimos of northern Alaska. In the coastal region, hunting the huge bowhead whale from an open boat had not only subsistence value but also great ceremonial meaning. Products of the whale were supplemented by the meat and oil of other sea mammals, and by fish and birds in season. The second pattern of subsistence was that of the inland people, who depended largely on the caribou for their food and clothing needs, but also used small animals, fish, birds, and berries at the appropriate season. The third pattern was found along the Kobuk and Noatak Rivers and involved mainly sea mammal hunting in the spring and fishing along the rivers during the summer (Oswalt, 1967, pp. 92-102).

The Eskimos of northern Alaska had a rich social, spiritual, and ceremonial life, especially during the winter months, when subsistence activities were less demanding. Among the coastal people, whaling was particularly important and represented symbolically the annual renewal of the seasons. Boat captains and their crews spent much time preparing weapons, repairing boats and equipment, and listening to shamans who were wise in the ceremonial demands of the hunt. The chase itself lasted two to six weeks and was followed, if successful, by a victory celebration, including competitive games and gift-giving on a lavish scale (Spencer, 1959, pp. 332-338). A similar type of celebration held during the winter months was the Messenger Feast, which brought together whaling crews from neighboring villages for days of feasting, dancing, and the exchange of gifts (Oswalt, 1967, p. 226).

The religious life was complex and varied somewhat geographically. The Raven was the creator of the sun, moon, and earth, as well as man. The people believed that animals were morally and intellectually superior to humans and only allowed themselves to be caught voluntarily or when coerced by magical means. Much of the ritual was concerned with avoiding giving offense to the animals being hunted, especially the sea mammals. Once caught, sea mammals were offered a libation of cold water and land mammals were presented with small gifts. Both were butchered in a specific way to ensure that the animal's soul, or *inua*, could escape and thus assure future hunting success (Spencer, 1984, p. 334).

Beyond the spirits of the animals, the northern Eskimos saw a world populated with various supernatural creatures such as dwarfs, giants, and man-animal hybrids. Evil spirits and ghosts of the dead were also abroad and often, if offended, interfered in human affairs.

Health and the Stages of Life

Pregnancy, Childbirth, and Infant Care

Much is known of the health aspects or daily life among the Northern Alaskan Eskimos, since they are perhaps the best studied of all Alaska Native groups. The following account is selective, and based primarily on the customs of the Barrow Eskimos, with variations noted as appropriate.

A woman was considered pregnant as soon as she missed a menstrual period. Nine moons were then counted to

predict the time of delivery. Toward the end of pregnancy, the sex of the fetus was guessed by the belief that a woman became thinner before the birth of a boy but gained weight before delivery of a girl (Spencer, 1959, p. 229). Many such beliefs and taboos surrounded pregnancy and childbirth. A pregnant woman was not permitted to walk backward out of a door lest a breech delivery result, although this outcome could be averted by the woman saying, "If a child is born, it won't be turned around." Further beliefs were that the placenta would be adherent if the woman placed a pot or vessel over her head, or that the baby would be born with a caul if she put one bag inside another. A pregnant woman had to keep her arms in her parka sleeves at all times or the child might be born without arms. She and her husband were enjoined from using string or cord because the baby might be strangled by the umbilical cord (Spencer, 1959, p. 230). At Point Hope, a pregnant woman could not participate in whaling, since she could not urinate on the ice (Weyer, 1932, p. 375). Here and elsewhere laziness in the mother portended laziness in the child.

Birth took place in a snow hut built for the purpose by the husband and only large enough to accommodate the woman and one assistant. The inside walls of the hut were lined with moss and the outside smeared with dog feces. The floor of the hut was also lined with moss that had been collected and dried by the woman and her husband during the latter stages of pregnancy. At the onset of labor the woman entered the hut accompanied by a single female relative, usually her mother, who had herself had experience in childbirth.

The pregnant woman delivered the infant in a kneeling position, while holding on to a ceiling beam for support. Her mother received the baby but made no effort to facilitate the birth process. At her own house other women often busied themselves untying knots to ease the passage of the infant through the birth canal. A shaman might also lend his support by singing, but he had to do this from a safe distance, since he could lose his power if he came in direct contact with the parturient woman.

The newborn was laid on the moss on the floor of the birth hut. After delivery of the placenta, the assistant cut the cord with an *ulu*, or woman's knife, and tied it, after which the placenta and cord were wrapped in skins and taken out to be buried. For the mother to look at the placenta would make her eyes weak.

The mother remained in the hut for five days if the infant was a boy and four days if a girl. During this period she was prohibited from eating raw meat or blood, but encouraged to take food from animals whose characteristics she wanted her child to assume. The infant was not allowed to nurse for two days but instead was given small amounts of warm water and oil. The mother licked the baby clean and kept it in her parka, using diapers of caribou skin lined with moss. The mother returned to the main house with her child after four or five days, where she donned new clothes and resumed her ordinary way of life. The child was given the name of a deceased relative (Spencer, 1959, pp. 231-33).

Earlier accounts are not always in agreement with that outlined above. For example, one witness asserted that no one was allowed near the woman in labor except her husband, who passed her food from time to time. Moreover, after delivery the mother and infant were required to remain in the tiny hut for a full month (Ray, P. H., 1885, p.

46). The period of confinement along the Kobuk River was seven to ten days, while on Norton Sound it might be as long as 20 days (Cantwell, 1889, p. 82; Zagoskin, 1967, p. 109).

According to Dr. Samuel Call (as cited in Jarvis, 1899, pp. 120-21), the mother was left alone in the birth hut no matter what the season of the year. She gave birth in a squatting position, with her knees apart and the legs flexed upon the thighs. Between contractions she plucked eight to ten hairs from her head and braided them into a ligature for the umbilical cord. Following delivery she cut the cord with a flint knife, tied it, and rolled it into a piece of deerskin, after which she hid both placenta and cord in a secret place. Other accounts confirm that the mother delivered by herself, sometimes in the open air if the family were traveling (Giddings, 1961, p. 153; Jarvis, 1899, p. 121; Weyer, 1932, p. 376). Differing customs were also known with regard to disposal of the afterbirth (Weyer, 1932, p. 208).

The mother normally carried her child inside her parka as she went about her daily tasks. While indoors she set the infant down on skins. The child was never cradled or tightly bound as in many cultures (Spencer, 1959, p. 234-235). The infant was breast-fed on demand and took no other food until at least the age of one year, when he or she was given broth or pre-chewed meat. Weaning was gradual, with some children nursing intermittently to the age of four or five years (Simpson, J., 1855, p. 927; Weyer, 1932, p. 176; Zagoskin, 1967, p. 109). In the few instances where the milk supply was inadequate, the child might be given out to a wet nurse, although early weaning was considered a more desirable course (Spencer, 1959, p. 235).

Children were "toilet-trained" at an early age. Despite the use of moss-lined diapers, the mother encouraged bladder and bowel control as early as two or three months by holding the child over the wooden urine vessel and blowing gently on its face, presumably to initiate a reflex response (Spencer, 1959, p. 235). Early excretory control was particularly important in a climate where wet clothing might be hazardous. As they grew, children were treated with indulgence and good humor. Corporal punishment was not used, nor were there intentional trials of pain, cold, or stamina, as in some other cultures. Perhaps normal life was hard enough.

The harsh life of the Arctic sometimes led to the necessity of infanticide, although the practice seems to have been infrequent (Seemann, 1853, p. 66). To care for a small suckling infant could be a serious drag on the resources of a community, especially in times of scarcity, or when the group was travelling (Weyer, 1932, p. 132). Although males were not exempt, female infants were always at greater risk as victims, because of the continuing need for hunters in the band. When the deed was considered inevitable, the infant might be brought naked to the graveyard and its mouth filled with snow (Nelson, 1899, p. 289). While a family was on the move, a newborn might simply be left beside the trail (Jarvis, 1899, p. 121). One witness relates how a mother put an unwelcome infant into a sack and tried unsuccessfully to crush her. The baby was rescued by her father, who was impressed by her ability to survive (Jenness, 1957, p. 41). Other candidates for infanticide might be the offspring of a mother who died in childbirth, one of a set of twins, or of an infant born with deformities (Edmonds, 1966, p. 30; Hooper, C. L., 1881, p. 57; Snow, W. P., 1867, p. 262; Weyer, 1932, p. 132). Occasionally an older child was

subjected to the same melancholy fate. Weyer (1932, p. 133) knew of a case in which a two-year-old girl was killed when a son was born. Nelson (1899, p. 290) was told by an Eskimo that a girl of five or six might be left to perish on the tundra or sea ice if he disliked her or if he was having difficulty providing for his family.

Ornamentation

As children grew older, they acquired the facial ornaments characteristic of their culture. Although fairly simple ornaments were used among the arctic Eskimos, they have been described in great detail by early writers. The use of labrets among the northern Eskimos was an ancient practice. Lip ornaments of various designs made from wood, ivory, and stone have been recovered from several archeological sites (Giddings, 1964, pp. 148-149; 1952, pp. 87-88; VanStone & Lucier, 1974, p. 1). Several eighteenth century accounts (Cook, 1967, p. 3(1):438; Daurkin as cited in Masterson & Brower, 1948, p. 66; Steller, 1922, p. 103) and even a possible seventeenth century account (Dezhnev as cited in Ray, D. J., 1975, p. 13) refer to the practice of the people of the Bering Strait region wearing in their lower lips a piece of ivory or bone, a custom not observed among the native peoples of Siberia. On the other hand Ellis (1782, p. 1:330), one of Cook's surgeons, saw no labret holes in the Eskimos around Cape Prince of Wales. The nineteenth century is also rich with descriptions of the use of labrets. In general, these were worn by the men in holes made in childhood on either side of the lower lip. Labrets were shaped somewhat like a collar button, or stud, with a narrow waist to keep them from falling out. They might be made of many materials, including coal, wood, gravel, agate, and malachite, but the most prestigious type was a circular piece of white stone 1.5 inches in diameter, to which was affixed a half a large blue bead (Simpson, J., 1855, pp. 921-922; Stockton, 1890, p. 197). Unusual shapes were sometimes seen, such as a four-inch piece of ivory that jutted out from one side of the mouth like a wild boar's tusk (Aldrich, 1889, p. 70).

Labret holes were usually made toward the end of adolescence. The boy's father engaged a man known to be skillful in making such incisions. The boy was made to sit between the knees of the surgeon, with his hands over his ears. While his head was thus tightly held, his name was called out by the operator. If he did not hear the call, the surgeon knew that the boy was being held tightly enough for the procedure. A flat piece of wood was placed between his lips and teeth and a sharp chisel-like instrument was driven in rapidly at the corners of the mouth. The surgeon then sponged away the blood and gave the boy a mouthful of urine, which was expelled through the newly made wounds. "Training" labrets were then immediately inserted. Throughout the procedure the boy was expected not to utter a sound (Spencer, 1959, pp. 241-242). Beechey (1831, p. 1:384) observed a couple of boys not long after their incisions had been cut and while their holes were still raw and painful. They were both wearing in the holes a piece of ivory, which had to be turned frequently, causing considerable pain and bleeding. These initial labrets were gradually increased in size until a conventional adult labret could be accommodated (Simpson, J., 1855, p. 921). Once a youth donned labrets he was free to marry.

Labrets and their holes could be a disadvantage in the arctic climate of northern Alaska, although Beechey (1831) purchased some labrets straight from the mouth, so to speak, without the seller "minding the inconvenience of the

saliva that flowed through the badly cicatrized orifice over the chin" (p. 1:343). Some individuals stuck their tongue through the incisions. Dr. Simpson (1855) observed at Barrow that:

...it is surprising how a man can face a breeze, however light, at 30 or 40 below zero, with pieces of stone in contact with his face, yet it seems from habit the unoccupied openings would be a greater inconvenience than the labrets which fill them. (pp. 921-922)

In periods of intense cold, in fact, men were frequently obliged to take out their labrets (Seemann, 1853, pp. 50-51). According to one observer, the incisions followed natural skin lines so well that they did not gape when empty, but another noted that the teeth could sometimes be seen through an incision when the ornaments were not in place (Nelson, 1899, p. 48; Simpson, J., 1855, p. 922).

Perforation of the nasal septum was also practiced in the north, usually among women. Beechey (1831, p. 1:393) observed that the women around Chamisso Island wore in the nose a large blue bead suspended on a piece of baleen. When one woman was given a large stitching needle as a present, she thrust it immediately into the perforation in her nose, again reminding the sailors irresistibly of a sprits'l yard. Beads worn in a similar way were noted in other areas, including Wales (Ray, D. J., 1975, p. 91) and Norton Sound (Nelson, 1899, p. 52; Zagoskin, 1967, p. 106).

Ornaments worn in perforations of the earlobes were also fairly widespread in northern Alaska, having been noted by several eighteenth century visitors (Ellis, 1782, p. 1:330; Merck, 1980, p. 190; Sarytschew, 1806, p. 45). These ornaments were usually blue beads or pieces of mother-of-pearl, bone, or ivory. Sometimes long strings of beads were hung from the ears loosely across the breast (Simpson, J., 1855, pp. 921-922).

Tattooing of the face was also a very early practice. A figure of a human face found at an Ipiutak site dating from the fourth century A.D. clearly shows lines representing tattoos on the chin and cheek (VanStone & Lucier, 1974, p. 1). In 1778, an elderly man, perhaps a chief, was observed to have a line across his nose to both cheekbones and ending in the design of a fish on each side (Ellis, 1782, p. 1:331). In the 1790s Merck (1980, p. 190) was perhaps the first Westerner to note Eskimo women with tattooed lines from the lower lip to the chin, as well as some markings on the outside of the forearm above the wrist. Later writers described various patterns of tattoos in men and women, but with emphasis on the simple vertical lines adorning the chin of women (Cantwell, 1889, p. 88; Hooper, W. H., 1853, p. 225; M'Clure, 1857, p. 63; Miertsching, 1967, p. 42; Nelson, 1899, p. 50).

The age at which tattoos were made seem to have varied, some being applied at puberty and others after marriage. The method used in this area was to pinch up the skin in the direction of the line to be made, and then make fine stitches, pulling a soot-blackened thread completely through the skin each time. A narrow line required only a single row of stitches, whereas a broad line might need four or five rows of stitches close together (Simpson, J., 1856, p. 922). The procedure was painful and girls were not expected to hide their discomfort (Spencer, 1959, p. 243).

Maturation

When a girl from the Barrow area began her menses for the first time, she was confined to a special section of the house for five days. During this period she wore a special hood of caribou skin that shaded her eyes, since to look at the light was thought to be harmful. The girl could not mix her urine with that of others and therefore had to be led by another woman some distance from the house to relieve herself. She further was forbidden to touch raw meat, and had to drink from a special wooden vessel. A hunter would lose his power to kill animals if she touched a fresh carcass; likewise, a shaman would lose his powers if she should touch him (Spencer, 1959, pp. 243-244).

Many variations on this basic pattern have been described for the northern Eskimos. In Norton Sound the period of seclusion was originally 40 days, but this was later considerably shortened. Here the girl was thought to be surrounded by a strange atmosphere, which if a young man should come in contact with it, he would become visible to all the animals he hunted (Nelson, 1899, p. 291). Around Selawik Lake and the Kobuk River a girl was isolated for as much as a year and required to wear a large hood to shield her eyes. During this time she was assisted by her mother and taught the responsibilities of womanhood (Giddings, 1961, pp 20-21, 154; Weyer, 1932, p. 374). At the opposite extreme were the Nunamiut, who required no period of seclusion at all, although the girl had to drink exclusively out of her own skin vessel for the period of a month and could not have sexual intercourse at least until after her second menstrual period (Gubser, 1965, p. 208).

In later life a menstruating woman was subjected to somewhat less rigid restrictions. For example, she was not permitted to enter a *karigi*, nor approach a hunter (Oswalt, 1977, p. 209; Weyer, 1932, p. 372). She further could not eat fresh or raw meat, although she could prepare and cook it, and had to use special eating and drinking utensils. Women wore a small, soft deerskin pad lined with moss to absorb the menstrual discharge. At the end of her period she changed her clothes, saving the old garments for use in subsequent menses (Spencer, 1959, p. 244).

For boys the transition to adulthood was marked by a special ceremony when he killed his first seal or other large game. He was not permitted to taste the meat but instead was expected to distribute it to neighboring families. Special recognition was given for his first *ugruk*, bearded seal, or walrus kill. In the latter case the head of the walrus was kept in the *karigi* for five days, after which the boy and other men took a sweatbath, followed by dancing and singing (Oswalt, 1967, p. 200). Once the young man was recognized as a hunter, he began to dress differently and was permitted to attend shamanistic performances for the first time (Spencer, 1959, p. 241).

Old Age, Dying, and Death

As people grew older, the hard physical labor, exposure to the elements, and not infrequent famine took their toll on the northern Eskimos. Adults were often thought to look older than their stated age. Beechey (1831, p. 2:303) thought that the women lost their "comeliness" early in life and that age was accompanied by a haggard and

careworn expression, often aggravated by sore eyes and teeth worn down nearly to the gum. Some looked old by the time they were thirty (Jackson, 1893, p. 1286). An early observer at Barrow was of the opinion that the people usually died by the age of 40, and by 60 the survivors were very decrepit (Ray, P. H., 1885, p. 45).

Despite these gloomy views, however, it is apparent from many sources that some individuals did reach old age and that usually such persons were treated with respect, although one early writer said that the elderly were subject to derision (Seemann, 1853, p. 66). Older women tried to make themselves useful by sewing, gathering feathers for bedding, and similar tasks, while the men carved, or engaged in other sedentary occupations. Both men and women tended to stay indoors and to remain silent and uncomplaining (Spencer, 1959, p. 252). A few attained a great age, even in the earliest historical times (Cantwell, 1887, p. 76; Murdoch, 1892, p. 39; Simpson, J., 1855, p. 924).

The elderly not infrequently enjoyed a certain prestige or even a leadership role. The chief of a group of Eskimos met by Cook's men in Norton Sound was an old man (Ellis, 1782, p. 1:331), as was a chief of Nuwuk, a village near Barrow (Murdoch, 1892, p. 39). Beechey (1831, p. 1:383) described a "blear-eyed old hag" who was consulted on all decisions. A woman of the Noatak described by the same phrase a half century later was famed for her gift of prophecy (Cantwell, 1887, p. 57).

Although care and respect for the elderly seemed to be the norm in early times, the question of possible senilicide comes up repeatedly. Some early writers denied that the practice existed at all (Seemann, 1853, p. 66; Simpson, J., 1855, p. 927). Yet there seems little doubt that on occasion an elderly person, often at his or her own request, was left to die because the community was facing hardship or even starvation. Weyer (1932, p. 138) tells of a case known to him of a twelve-year-old boy from the Diomedes who stabbed his father at the latter's request. Women also sometimes asked to be stabbed or strangled when they felt they could no longer contribute to the welfare of the community. This melancholy act was usually carried out by a family member to avoid a blood feud, although he was sometimes assisted by a shaman (Aldrich, 1899, p. 170; Jackson, 1893, p. 1290; Weyer, 1932, p. 138).

A preferred method was to seal up an elderly or a sick person in a snow shelter to die. Brower (1960, p. 98) personally found such a woman sealed in a snowhouse and adopted her for the winter. She made herself useful sewing and patching clothing and then died of pneumonia the following spring. During the severe winter of 1885-86 at Point Hope several elderly members of the community and even some women and children were left to die (Aldrich, 1889, p. 170). The Nunamiut, who were probably subject to periodic famine more often than other northern Eskimos, used senilicide relatively more frequently (Gubser, 1965, p. 122; Spencer, 1959, pp. 92, 94). Many examples are known from other parts of the North American Arctic (Weyer, 1932, pp. 137-139).

It is possible that some cases of supposed senilicide were in fact based on observer misunderstanding. When elderly or sick people were found in an isolated snow house or tent, it may have been in accordance with the strongly held view that death should not occur in the regular dwelling, lest the house have to be permanently abandoned. A sick or dying person often asked to be moved once death seemed inevitable (Jackson, 1893, p.

1290; Jenkins, 1943, p. 149). Such individuals might even request the shaman's help in dispatching them, if dying seemed unduly prolonged.

The Eskimos of northern Alaska considered death an inevitable natural event and did not fear it. At the moment of death the *inua*, or spirit, left the body, as did the mind, or *ishuma*. At that moment it was a matter of discretion not to be too close to the body (Gubser, 1965, p. 217). Once death had occurred, a shaman might be called in to ask the dead body the cause of death (Spencer, 1959, p. 252). The body was then dressed in fine clothing and removed through the skylight for burial. At Barrow, the body was laid on the open ground, covered with sealskin and with the head turned toward the Point (Simpson, T., 1843, p. 153-4). No marker was used, although some personal possessions of the deceased were laid beside the corpse. The cemetery was never visited by relatives or friends and ultimately the body succumbed to the depredations of foxes and other animals (Spencer, 1959, p. 253). Among the Nunamiut the body was placed on high ground and covered with skins or perhaps rocks (Gubser, 1965, p. 217). The Kobuk River Eskimos placed the corpse in a canoe and covered it with spruce poles in a conical arrangement (Giddings, 1961, p. 22), while along the coast platform burials were more common (Jackson, 1893, p. 1278; Oswalt, 1967, p. 207). Mummies were sometimes made on King Island by removing the viscera shortly after death and stuffing the body cavity with feathers. After one week the feathers were removed and the body tightly wrapped with burlap and bound with ropes (Goldstein, 1912, p. 174).

After a death had occurred, the relatives were expected to remain indoors for four or five days, during which time they could receive no visitors or change clothing, lest the ghost of the deceased return. Ordinary activities were forbidden, except for those essential for cooking (Gubser, 1965, p. 218; Spencer, 1959, p. 253).

The Bering Sea Eskimos believed in a kind of afterlife, the nature of which was largely a matter of chance. For example, a person dying of accident, violence, or starvation went to a land of plenty in the sky, whereas one who died of natural causes was sent to an underground land where he had to depend on gifts of food, clothing, and water from his relatives (Weyer, 1932, p. 249). Ghosts of the dead were sometimes troublesome for the relatives, announcing their presence by calling their name or buzzing in their ear. Some ghosts also appeared in dreams or even as visual apparitions. If an individual failed to report the experience of hearing or seeing a ghost he would become ill, whereas a shaman who heard the confession could often affect a cure (Spencer, 1959, p. 292).

Traditional Medicine

Causes of Illness

The northern Eskimos believed that the more serious illnesses were the result of supernatural forces, such as sorcery, the intrusion of evil spirits, soul loss, or the power of certain natural phenomena.

Sorcery could be employed by another individual, often a shaman, to cause sickness in a person who himself might

be either a shaman or a successful hunter (Oswalt, 1967, p. 223; Spencer, 1959, p. 310-311). In other cases a shaman might inflict illness to avenge a real or imagined wrong, or even possibly in order to gain a shaman's fee for a successful cure (Chance, 1966, p. 58). The methods used by a sorcerer included cutting off a piece of the victim's clothing, which, if not discovered and the garment thrown away, would lead to illness and death. Another method was for the shaman to send out mittens attached to a string, which were said to seize the victim's soul and remove it. The commonest method of all, however, was for the sorcerer simply to sing a magical chant in his home, in the *karigj*, or out on the tundra (Spencer, 1959, p. 311).

Soul loss was an important cause of illness. Two types of soul might be involved, the *inua* and the *ishuma* (Gubser, 1965, pp. 211-215). Loss of the *inua* led to serious illness and even death, whereas loss of the *ishuma* led to delirium or coma (Weyer, 1932, pp. 298, 321-322). The soul could be taken away by an evil shaman, or it might wander away during a dream and fail to return, or might be lost as the consequence of breaching a taboo imposed by a shaman (Spencer, 1959, p. 303-4).

Less commonly sickness could result from the intrusion of an evil spirit, or of an object endowed with magical properties, into the body of the sufferer. Magic spears, arrows, or darts sent into the victim by a sorcerer were thought to be the cause of inflammation or pain in some part of the body. Such "objects," of course, were usually visible only to the sorcerer or shaman (Spencer, 1959, pp. 306, 310; Weyer, 1932, p. 324).

The intentional or unconscious breach of a taboo or of a prescribed rule of behavior could also be the cause of sickness (Ackerknecht, 1948, p. 918; Jenness, 1957, pp. 18-19). Giddings (1961, pp. 18-19) tells of an epidemic that was attributed by the Kobuk Eskimos to a woman who cleaned the hair off a caribou hide on which a child had urinated. Similarly, the Nunamiut believed that a person throwing a dead eagle onto a freshly skinned grizzly bear would cause people to die. Other causes of illness might include touching a body that had been dead for a period of time (French, 1901, p. 60), or the removal of jade from the so-called Jade Mountain on the Kobuk River (Cantwell, 1889, p. 57). Finally, certain natural phenomena were thought to be the cause of illness. For example, the Bering Strait Eskimos believed that epidemic diseases came from the sun or the moon. An eclipse of the moon was thought to foretell such an epidemic (Weyer, 1932, p. 382).

Healers

Among the North Alaska Eskimos the healing of disease was the responsibility on the one hand of friends and relatives and on the other the shaman. For simpler problems with an immediately evident cause, such as an injury or a cold, care was rendered by the patient individually, or by family members or villagers known to be particularly skilled in such matters. Where the illness seemed more serious or the cause was obscure, the sufferer consulted a shaman, not only in hope of a cure but also to find the cause of the illness and to hear a prediction of the outcome.

A shaman acquired his special abilities partly through heredity and partly through a long apprenticeship. Although the son or daughter or a shaman might "apply" for the role of shaman, the more usual pattern was for an older shaman to look to his younger relatives, or perhaps others, for a person of suitable temperament to become his successor (Aldrich, 1889, p. 168; Spencer, 1959, pp. 301-302; Stoney, 1900, p. 90). The essential quality in the aspiring shaman was a mysterious ability to understand the supernatural (Weyer, 1932, p. 428). On the Kobuk it was believed that a child destined to be a shaman was born with blood over the eyes, which remained until the child reached the age of four. At the age of five the child went into the mountains for a period of one to five months to commune with the spirits, who fed and taught him. Upon his return he was said to vomit everything he ate during this period (Stoney, 1900, p. 90). Not every would-be shaman displayed such precocity, but each had some sort of supernatural experience, such as a dream when spirits appeared to him, or when he heard his name being called while alone on the tundra. Usually an individual accepted such a call, but examples are known where it was rejected (Spencer, 1959, p. 302).

There has been speculation that shamans were often psychiatrically or medically abnormal, perhaps suffering from schizophrenia, epilepsy, or other problems of the sort (Birket-Smith, 1959, p. 172; Spencer, 1959, p. 302). Whatever the truth of these assertions, a shaman was likely to be an introverted, sensitive, and dreamy sort of individual. Despite these character traits, he or she usually led a relatively normal life as a hunter or homemaker, with only a segment of time being devoted to spiritual pursuits (Stoney, 1900, p. 90; Thornton, 1931, p. 101).

A shaman gradually acquired the skills of singing, dancing, and legerdemain, which might either be passed on from his own preceptor or learned from his "helper spirits" or *tunorak*, one of which might be especially powerful (Oswalt, 1967, p. 222). He made his own drum and other paraphernalia, but learned his songs, which were traditional, from his teacher, often upon the payment of a fee (Giddings, 1961, p. 15; Spencer, 1959, pp. 302-303).

Although shamans wore no distinctive dress or badge of office, some dressed in elaborate outfits befitting their wealth. They received payments when successful in durable goods such as clothing, boats, or dogs. A successful cure brought a handsome fee, in part because the patient feared the consequences of an angry shaman, who might bring further illness or pain. Sometimes a shaman stopped his ministrations in mid-course to allow the family to increase their "contributions" (Aldrich, 1889, p. 169; Spencer, 1959, p. 308; Weyer, 1932, p. 434).

The number of shamans in a community might vary widely. Around the turn of the century, Thornton (1931, pp. 103-104) was aware of eight in the village of Wales alone. Smaller communities might be served by an itinerant shaman who stayed for a few days as the house guest of the patient before moving on (Gubser, 1965, p. 203).

Besides the shamans, various other individuals in the community had certain healing skills, such as knowledge of the medicinal use of plants and other substances, or of the techniques of surgery.

Magico-Religious Healing

The shaman's methods of healing were varied and depended to a large extent on what was felt to be the cause of the sickness. The shaman performed rites either in the patient's house, or sometimes in the *karigi*, where he or she could command a much larger audience. Initially the shaman might walk around the patient, viewing the individual from every angle. Next the shaman might touch the patient at the site of the pain or illness, then lick her or his hands and rub them over the affected part. The shaman then might brush the area with a duck wing, or perhaps suck at the affected part. If the illness was resistant to these simple therapeutic measures, the shaman began to sing, dance, and beat the drum. The next stage of the performance was for the shaman to commune with her or his familiar spirits by gradually working up to a frenzy of dancing and singing. Suddenly the activity might stop, the tambourine would be put on the shaman's head and her or she would lapse into a trance-like state, which in extreme instances might last for a couple of days, during which the soul was supposed to have left the body. When the soul returned the shaman gave a little groan and then began drumming again. Sometimes the shaman then could announce that he or she had found and recovered the victim's lost soul, or perhaps that the case was turning out to be more difficult than previously thought.

What was particularly characteristic of these performances was the wild behavior of the shaman, building up to a dramatic climax when the room was suddenly overwhelmed with an expectant silence (Spencer, 1959, pp. 306-307). As Brower (1960, p. 57) watched a Point Hope shaman writhing on the floor and then falling into a silent trance, he found it easy to believe that the devil himself was issuing the instructions.

Another shamanistic technique known through most of northern Alaska was "lifting." At Barrow the shaman, after singing and dancing over a patient, sometimes placed a special stick under the individual's feet and lifted them up, while asking the familiar spirits whether the patient would recover. If the feet felt light, recovery was likely. The head might also be lifted by means of a string around it attached to a stick. Here, however, death was foreshadowed if the head could be easily raised (Spencer, 1959, p. 307). Along the Kobuk River, the shaman encircled the affected part of the body with a belt and, using a stick as a lever, tried to lift the part while asking questions of the spirits. Again, the ease with which the body part could be raised was the spirit's answer (Stoney, 1900, p. 89). In this region head-lifting was sometimes also performed by non-shamans (Cantwell, 1887, p. 51).

An evil spirit causing illness could be driven out by exorcism. An early eyewitness account of such a technique described the shaman facing the entrance of the house, while beating his drum and making a babbling noise with his lips. Finally he gave a long speech addressed to something down the trapdoor, bidding it "go!" (Murdoch, 1892, p. 422). Another account emphasized that the real art of exorcism was to determine which spirit was at work, not how to drive it out (Petroff, 1882, p. 133).

Shamanistic performances thus were filled with wild dancing, singing, sleight-of-hand, dramatic climaxes, and above all the creation of an atmosphere of tension and expectancy. As such they were memorable to the patient

and his family and undoubtedly led to an adjustment in their attitude toward the illness. Though many were happy to dismiss shamanistic cures as quackery (Hooper, C. L., 1881, p. 39; Johnsoy, 1944, p. 55), there seems little doubt that many found relief from their symptoms after a shaman's ministrations. Captain Charles L. Hooper (1884) expressed a mature thought when he wrote:

To the ordinary observer, shamanism...appears sheer humbug, but when we consider the great length of time that it has held its own in various parts of the world, widely separated from each other, the power exercised by it and the confidence reposed in it by its followers, we can but ask the question, can a doctrine based upon mere deceit and fraud do this? (p. 112)

Empirico-Rational Healing

The healers of northern Alaska did not have an intimate knowledge of plant life since their tundra home was covered with snow and ice well over half the year. Although the land bloomed abundantly with many plants during the short arctic summer, few of them were known for their healing properties (Lantis, 1963, p. 27). On the North Slope, where the summer was shortest, the Eskimos apparently used no plant remedies at all, nor did they know of vegetable poisons (Spencer, 1959, p. 328). Along the Kobuk and Noatak Rivers and in the interior, on the other hand, only a few healing plants were used, such as artemisia for respiratory disorders and green willow bark for backache (Cantwell, 1889, p. 83; Gubser, 1965, pp. 239-240; Lucier, Van Stone & Keats, 1971, p. 254). Labrador tea (*Ledum decumbens*) and *Achillea borealis* infusions were thought to have some general medicinal value. White spruce gum was sometimes applied to open wounds, as were poultices derived from powdered artemisia leaves (Anderson, J. P., 1939).

Rather than plants, the universal remedies of the northern Eskimos were whale blubber and seal oil, both of which were available to everyone for most of the year. Blubber was used for many medicinal purposes; for example, strips of blubber were inserted into the nostrils to control nosebleed, or a piece of blubber was applied to a baby's buttocks for diaper rash. Boils were sometimes treated by the application of a blubber and caribou hair poultice. Open wounds or burns might also be soothed by whale blubber (Gubser, 1965, p.214; Kirchner, 1982, p. 104; Spencer, 1959, p. 328). Seal oil likewise had a variety of therapeutic uses, especially among the Nunamiut and along the Kobuk and Noatak Rivers, where it was used internally for stomach disorders and as a laxative. Externally it might be applied to cuts, burns, frostbite, or simply dry skin. It also enjoyed standing as a remedy for earache and a stuffy nose (Gubser, 1965, p. 214; Lucier et al., 1971, p. 254; Stoney, 1900, p. 89).

Various other biological products found some therapeutic use. Human urine was used to staunch the flow of blood from accidental cuts or for from the incisions made in the lip and ears for ornaments (Spencer, 1959, p. 329). Along the Noatak, porcupine excrement was sometimes chewed and swallowed for diarrhea (Lucier et al., 1971, p. 254). The Kobuk Eskimos rubbed mashed cranberries on a rash around the waist and then covered the area with a caribou, marmot, or rabbit skin. For a sore mouth a patient sometimes chewed dried young bank swallows, whereas for toothache he held a small piece of grayling fin between the teeth (Giddings, 1961, p. 18).

Surgical techniques were not highly developed in northern Alaska, but a few individuals seem to have had special skills, including those who cut labret holes (Spencer, 1959, p. 242). Shamans personally performed surgery on occasion, as did relatives of the patient (Gubser, 1965, pp. 214-215; Jarvis, 1899, p. 122).

The technique of piercing, or as it was sometimes later known, *poking*, was employed in early times and survives today in some villages (Dixon & Kirchner, 1982). Piercing involved an incision in the skin with a lancet of stone, flint, jade, or other substance, in order to let out a harmful substance or small amount of blood. In Barrow, Murdoch (1892) described cases of piercing on the chest wall for a "liver complaint," in the scalp or back for "rheumatism," and on the side of the knee for joint pain (pp. 422-423). Piercing was also used among the Nunamiut for joint pains (Gubser, 1965, p. 214) and along the Noatak for the swelling caused by infection (Lucier et al., 1971).

Closely related to piercing was bleeding, in which the goal was to remove enough blood to relieve pain, reduce congestion, or rid the body of "bad blood." Blood-letting was also carried out with a small lancet, or even a sharpened bear claw, usually but not always by a shaman (Spencer, 1959, p. 329; Weyer, 1932, p. 324). Bleeding was used for headache, backache, painful joints, snow blindness, and even toothache (Dixon & Kirchner, 1982). The Kobuk River Eskimos sometimes used it in the treatment of insanity (Stoney, 1900, p. 87). Nelson (1899) personally observed a shaman "lancing the scalp of his little girl's head, the thin, long, iron point being thrust twelve to fifteen times between the scalp and the skull" (pp. 309-310). A method used in Barrow was to pinch the skin between two blocks of wood and then to cut the heaped-up skin with a chisel-like instrument (Spencer, 1959, p. 329).

A shaman or other individual might remove an embedded foreign body, such as an arrowhead, by enlarging the wound and freeing the barbs with a jade or stone lancet. Sometimes a shaman might sing or dance as a kind of primitive anesthesia before undertaking such a painful procedure (Gubser, 1965, pp. 214-215; Lucier et al., 1971, p. 253). A painful tooth might be knocked out by a chisel-shaped instrument struck by a mallet (Nelson, 1899, p. 310; Spencer, 1959, p. 329).

Amputation of a frozen limb was sometimes necessary, the surgeon waiting until there was a clear demarcation between living and devitalized flesh, in order to avoid both pain and bleeding. Stoney (1900, p. 89) noted that shamans amputated limbs on the Kobuk and even sutured the skin flaps over the end of the bone. In Barrow, Murdoch (1892, p. 40) observed a man with bilateral leg amputations for frostbite who was able to move on his knees. Dr. Call (as cited in Jarvis, 1899, p. 121) reported a twenty-eight-year-old pregnant woman who had also lost both legs to frostbite. She was said to be able to walk four or five miles a day on her knees.

Several forms of massage or manipulation were also used for treatment among the northern Eskimos. During late pregnancy and labor the patient's mother or another woman might try to facilitate a difficult delivery by squeezing

the abdomen firmly from behind (Spencer, 1959, p. 133-134). Massage of the abdomen during labor helped to relieve pain before delivery and reduced bleeding after delivery (Gubser, 1965, p. 211). Sometimes an attempt to induce an abortion was made in early pregnancy by strong downward pressure on the abdomen (Spencer, 1959, p. 229), or by having another individual jump on the abdomen or continually slap it (Jarvis, 1899, p. 121).

According to a modern practitioner, Mrs. Della Keats, massage was used to ascertain the position of the fetus before delivery, and sometimes could be used to turn the fetus to facilitate delivery. The technique of massage had many other applications as well, including liver problems, constipation, and could be used for assessing the condition of most internal organs. Massage was also employed to relieve the pain and deformity of sprains and dislocations, but not fractures (Lucier et al., 1971). Treatment of fractures consisted of trying to straighten the injured part and then applying a splint of some type. In Barrow and Anaktuvuk Pass splints were made of pieces of wood or baleen and were wrapped outside with caribou skin (Gubser, 1965, p. 214; Jarvis, 1899, pp. 121-122; Spencer, 1959, p. 329).

A few other modalities of treatment might be mentioned briefly. Ice and snow were sometimes applied to an acutely injured limb to reduce pain and swelling (Lucier et al., 1971, p. 254) and ice might be put on the back of the neck for nosebleed (Gubser, 1965, p. 214). Constipation was a common problem in the Arctic. Among the available treatments were seal oil, enemas with lukewarm water (Lucier et al., 1971, p. 255), and removal of impacted feces with a small spoon-like instrument (Spencer, 1959, p. 329).

CHAPTER 5. THE INDIANS OF SOUTHEASTERN ALASKA

The Setting

The region known as southeastern Alaska trends in a southeasterly direction from Icy Bay, near 60°N, to Dixon Entrance at 54°40'N. The area consists of a narrow strip of mainland and the thousands of rugged offshore islands of the Alexander Archipelago, which have been sculpted by the grinding action of many glaciers. Five of these islands are predominant, namely Prince of Wales, Baranof, Kupreanof, Admiralty, and Chicagof, the first of these at 2,231 square miles the third largest island in the United States. These and many smaller one enclose the so-called Inside Passage, a spectacularly beautiful protected waterway where tall, dark forests extend to the water's rocky edge. Although most of the narrow channels are dangerous for navigation, a few are broad and straight, including a virtually unobstructed run of 230 miles from Cape Ommaney northward to the site of modern Skagway.

The region is mountainous throughout; in fact, the islands of the archipelago are themselves partially submerged mountain peaks. In the northwest is the majestic St. Elias Range, the highest coastal range in the world, dominated by Mt. St. Elias itself at 18,008 feet. The eastern boundary of Alaska with Canada is demarcated by the Coast Mountains. No volcanic activity has been known in historical times, although it is evident that some mountains, notably Mt. Edgecumbe near Sitka, were once active. The glaciers of the region are impressive indeed; the Malaspina Glacier north of Yakutat Bay, for example, covers with its tributaries some 2,000 square miles of land surface. Other important icefields include the Muir Glacier in Glacier Bay and the massive Juneau Icefield/Taku Glacier. Rivers are for the most part rapid, relatively short, and non-navigable streams fed from the glaciers and mountain snow. A notable exception is the Stikine, which flows into the quiet waters of the Inside Passage near present-day Wrangell. This waterway, which extends far into Canada, was once a significant avenue of trade between the Alaskan Indians and the tribes of the interior. Other important trade routes were the Chilkat and Taku Rivers, both leading toward the Athapaskan country to the north.

The climate of southeastern Alaska is characterized by relatively mild temperatures and heavy precipitation. January is the coldest month, with mean temperatures ranging from 25-33 F, while in July the thermometer averages between 55 and 60 F. The mild temperatures are traceable to warm ocean currents that bring moisture-laden air masses onshore. These cause heavy precipitation in the form of rain, snow, drizzle, and fog, especially during the late summer and fall. Annual precipitation ranges from 26 inches at Skagway to nearly nine times that amount in one community on Baranof Island. The moderate temperature and heavy precipitation foster the luxurious growth of vegetation, the most striking examples being the giant coniferous trees and dense forest undergrowth. Among the larger trees, 70% are western hemlock and about 20% Sitka spruce, both of which can reach a height of nearly 200 feet. Other important trees are the Alaska and red cedar, the lodge-pole pine, and a few deciduous varieties such as cottonwood, alders, willow, and birches, which seek patches of sunlight in the

somber forests. Rich undergrowth includes mosses, ferns, and devil's club. Wildflowers are found chiefly on the higher slopes, where berries grow in abundance in their proper season.

Sitka deer are abundant in the islands of the Alexander Archipelago. A few caribou were once to be found on the mountain plateaus of the mainland, and mountain goats and Dall sheep still graze on the higher rocky slopes of the St. Elias and Coast Mountains. Black bears and some grizzlies are widely distributed in southeastern Alaska, as are wolves, wolverines, red fox, lynx, and land otter. Among the smaller mammals, marmot, squirrel, rabbit, ermine, porcupine, beaver, and muskrat may be found.

Among the sea mammals native to the region are whales, dolphins, and hair seals, all of which follow the fish into the inland waterways. Off the outer coast roam Steller sea lions, northern fur seals, and in former times the fabled sea otter. All five species of Pacific salmon (i.e., chum, king, pink, red, and silver) spawn in generous numbers in the streams and rivers of southeastern Alaska, but it is the pink salmon that constitutes an almost inexhaustible food resource. A variety of smelt known as the candlefish, or hooligan, appears every spring in abundance and is taken principally for its oil. At the water's edge various crabs, sea urchins, mussels, and clams can be easily gathered for food, while in deeper water haddock and halibut roam free.

The most characteristic birds of the region are the bald eagle and raven, both the subject of many myths and legends. Other common birds are the magpie, Steller's jay, ptarmigan, and various owls. The countless sea birds include ducks, geese, swans, cormorants, and many species of shore birds.

The native peoples of southeastern Alaska in the eighteenth century comprised the Tlingit and the Haida. Tlingit, or *Kolosh* as the Russians called them, were far more numerous than the Haida. The third group in modern times, the Tsimshians, moved to Annette Island from British Columbia in 1887 to form the village of (New) Metlakatla. Although they have many cultural similarities to the Tlingit, and especially the Haida, they do not properly belong to an account of the early cultures of Alaska.

The Tlingit probably originated near the Skeena and Stikine Rivers and spread northward, ultimately to the Yakutat Bay area, and perhaps as far west as Kayak island, where they abutted the territory of the Chugach Eskimos. By the eighteenth century they inhabited all the coastal mainland of southeastern Alaska and the entire Alexander Archipelago except for the southern half of Prince of Wales Island. The latter territory was the Alaskan home of a branch of the Haida Indians, who had migrated northward from the Queen Charlotte Islands.

In this section elements of the Tlingit culture will be emphasized, although with mention of Haida variants as appropriate. Originally the Tlingits were divided into a number of geographical groups. Every individual was a member of either the Wolf or the Raven *moiety* depending on the affiliation of his mother. The moieties, in turn, were divided into a number of clans, which traced their ancestry to a legendary progenitor. Clans, in turn, were further divided into extended families called lineages, consisting of a nucleus of men related maternally, such as

brothers, maternal male cousins, and sisters' sons. A village might include several lineages, which were politically independent and had their own chiefs, fishing grounds, and war parties. Marriage was always outside the moiety. Each clan had a chief, who was selected from a prominent family (Kaminskii, 1985, p. 34).

Tlingit villages were usually situated on quiet inlets or near the mouth of a river. They ranged in size from a few houses to communities of 50 or more buildings separated by clan. Houses were situated close to the shore, often just beyond the reach of the tide. The houses themselves were usually square, with four heavy corner posts and further support posts on each side. The walls were made of heavy planks which were lapped for closer fit. The gabled roof had a central skylight and smoke-hole over the earth fire below. The building was divided into several sleeping rooms, with storage spaces along the sides and rear wall. It had no windows and only a single door facing the beach. Often carved totem representations were placed on either side of the doorway.

These doorposts were one of three types of totem poles that have come to be identified with the Tlingit, Haida, and other tribes of the northwest coast, the other two types being memorial poles erected by a dead chief's heirs, and mortuary poles set up on or near a grave site. These sometimes elaborate carvings were meant to depict encounters of a family with spirits in the shape of physical beings.

Tlingit clothing in earlier times consisted of a long shirt with broad sleeves made of tanned skin and sewn down the sides. In addition, women wore a skin apron from the waist down. Both sexes often wore a fur cape with the hair outside over the skin shirt. The cape of a chief was made from more expensive furs such as those of the sea otter or black bear. Members of the Chilkat tribes sometimes dressed in a buckskin shirt, trousers, and moccasins, a style borrowed from the dress of their Athapaskan neighbors. A more distinctive Chilkat article was the elaborately designed blanket woven from mountain goat wool and yellow cedar bark twine. Tlingits generally wore waterproof hats woven from fine spruce root. For warfare they donned a visored wooden helmet, together with a cuirass of wooden slats bound together.

The Tlingit were above all fishermen and their principal quest the countless salmon that entered their streams and rivers every spring and summer to spawn. Salmon were sometimes caught individually with spears and hooks, but the most efficient method was the use of traps, which consisted of a kind of fence across a river mouth, with woven baskets on the upstream side of openings in the barrier. The fish caught in this manner were split and dried on rocks for later use. Other fish regularly taken included flounder, smelt, herring, haddock, and halibut. Beyond the larger fish, the Tlingits and their neighbors also ate many other products of the sea and shore, such as crabs, mussels, squid, and sea urchins, not to mention waterfowl. They hunted land animals, including deer, goats, Dall sheep, and even bear, only to a limited extent, using a bow or a deadfall trap. Plant foods included berries, roots, and tubers.

Fishing and hunting at sea were made possible by the use of finely crafted canoes constructed from a single large cedar or spruce log. These giant canoes sometimes carried up to 60 men but much smaller ones were known.

They were not very seaworthy or maneuverable, especially in comparison to the light skin boats of the Aleuts and Eskimos; indeed, the Tlingits rarely ventured far from shore. It is notable that sea mammal hunting was not highly developed in this region.

The mythology of the Tlingit recognized many gods, of whom *Ganook*, or the Sitting One, was judged to be the most ancient. *Yeil*, or the Raven, was a benefactor-god who led the human race from its previous miserable existence. *Yeil* could assume any form and often resorted to trickery to achieve his ends (Kaminskii, 1985, pp. 57-58).

The Tlingits and Haidas were warlike peoples who fought with courage and resolve among themselves and with their neighbors, using bows and arrows, clubs, and spears. They often treated captured enemies with great cruelty and made slaves of them.

Health and the Stages of Life

Pregnancy, Childbirth, and Infant Care

When a Tlingit woman reached the later stages of pregnancy, she was moved to a small hut of logs and branches constructed near her dwelling (White, 1880, p. 36). There she was assisted during labor by her mother or other female relatives, or perhaps by some local midwives, known as *kakatuk* (Langsdorff & Veniaminov as cited in Krause, 1956, p. 151). A contrasting account is that of Holmberg (1856-63, pp. 317-318), who from a ship anchored near a Tlingit village once heard women's cries and moans of women emanating from the forest. He was told by some Indian crew members that the sound came from several women in labor who could not be assisted in any way because they were unclean. His report is not confirmed elsewhere and may have resulted from a misunderstanding.

Immediately after birth of the child, however, the mother was indeed considered unclean and confined to the hut for ten days or even as much as a month (Khlebnikov 1976, p. 27), after which she washed herself and the child and put on new clothing (Lutke as cited in Krause, 1956, p. 151). She may have been permitted some food during this period, but little or no fresh food and certainly no salmon. The father's diet was also restricted for this time (Drucker, 1955, p. 174).

After the cord was cut, the infant was rubbed freely with grease, washed with urine, and then tightly wrapped in a blanket or skin to restrict movement. An inner padding of dried grass was changed daily (White, 1880, p. 36), but the dry moss used as a diaper seems to have been replaced less frequently (Fleurieu, 1801, p. 2:243). When the umbilical cord had dried up and fallen off, it was saved for magical purposes; for example, if it was buried on a goat trail in the mountains, the boy would grow to be a sure-footed hunter (Lantis, 1963, p. 3).

The child was not put to the breast until he had vomited up all the impurities that were thought to be a cause of later disease. If the infant did not render up these toxins spontaneously, the midwives manipulated the abdomen

until the required result occurred (Holmberg, 1856-63, p. 318). According to one early observer, the newborn's head was compressed and molded shortly after birth (Kotzebue, 1830, p. 2:49). Another states that female infants of high caste had their hips dislocated by the midwife to make them "good and prolific mothers" (Young, 1927, p. 159).

Haida birth customs were similar to those of their neighbors. The pregnant woman had to observe certain food taboos; for example, she could not eat cormorant flesh lest the child suffer from diarrhea. Likewise, eating abalone would cause the infant's neck to be turned around and thus obstruct delivery. An easy delivery was assured by putting eels around her body and letting them slip down inside her garments, or by dropping small pebbles or chips over her abdomen. Once the infant was born, however, the mother had to sit still for ten days with a broad belt of cedar bark around her. Following this period of immobility she bathed and could resume her ordinary duties. The umbilical cord was buried deep in the forest where no animal could dig it up (Swanton, 1905, pp. 47-48).

Once the Tlingit infant reached a few weeks of age, he or she was wrapped tightly in skins, bound to a board and carried about by the mother wherever she went (Holmberg, 1856-63, p. 318). The child was breast-fed from 10 to 30 months, a considerably shorter period than that by other Alaska Natives. Beginning at the age of one year the child was given solid food, either a piece of raw blubber from a sea mammal other than a whale, or else some pre-chewed dried fish (Holmberg, 1856-63, p. 318; L a k e as cited in Krause, 1956, p. 152). During the early months when children were restrained and dependent on milk, one early observer noted that they appeared lean and weak, despite the apparent adequacy of the milk supply (Fleurieu, 1801, p. 2:243).

As soon as a male child was old enough to walk, he was taken by his parents to the water's edge and bathed in the icy river or sea. Thereafter an uncle or other relative continued to bathe the child each morning no matter what the weather or season. The purpose of this custom was to toughen the child and thus its performance was entrusted to a relative, because the parents might grieve at the child's cries of distress (Khlebnikov, 1976, p. 27). Holmberg (1856-63, p. 318) was of the opinion that this practice led to a high infant mortality, but those who survived the early years made it their habit to bathe each morning in the numbing waters of the sea and, in fact, prided themselves on their insensitivity to the cold. In later years Tlingit men were known to practice self-flagellation to render them insensitive to pain.

Child-rearing was clearly the responsibility of the mother. At the time of puberty a maternal uncle took over the training of the boys, but girls remained their mother's charge until the time of marriage (Kaminskii, 1985, pp. 50-51). Children were generally treated with kindness and leniency, but when discipline became necessary, the task was again entrusted to an uncle, who might punish a child for crying too much by beating him with a stick (Krause, 1956, p. 152; Niblack, 1888, p. 368).

Ornamentation

The Tlingit and Haida, especially the women, wore conspicuous facial and body ornaments that virtually no eighteenth century visitor failed to notice. The labrets, in particular, excited wonder, puzzlement, sarcasm, and even disgust, not to mention endless speculations on the nature of feminine beauty, among the culture-bound Europeans. The Spanish explorer Bodega y Quadra (n.d., p. 39) in 1779 was the first European to remark on Tlingit labrets, but it was his pilot Maurelle (cited in La Perouse, 1799) who wrote the most informative account of the voyage:

All the married women have a large opening in the lower lip, filled up with a piece of wood, of an oval shape, and near an inch wide in its smallest diameter. The older a woman is the greater the extent of this elegant ornament; which renders them frightful, the aged particularly, whose lip, robbed of its natural elasticity, and dragged down by the weight of this precious jewel, necessarily hangs in a very disagreeable manner. (p. 1:246). The young girls, he went on to say, wore only a copper needle in the opening of the lower lip.

In the following decade several observers provided further details. The labret itself was noted to be slightly concave on either side, with a hollowed out rim to keep it in place in the lip (Portlock, 1789, p. 289). Some were as much as three inches long and one-half inch thick (Dixon, 1789, p. 172). The size was thought by some to be proportional to the woman's age or to the number of children she had borne, while others related the size to a woman's social status or to the respect which she was accorded. The weight of a large labret was such that it kept the lip nearly horizontal, exposing all the lower teeth and gums. When a woman wearing such a labret tried to eat, she would sometimes transfer some of the food temporarily to the "shelf" made by the lip (Portlock, 1789, p. 289). Another noted that the labret caused an involuntary flow of saliva while in place (La Perouse, 1799, pp. 1:402-3). The apparent inconvenience of the large labrets continued to strike the curiosity of visitors. D'Wolf (1861, pp. 47-48) knew of a woman who with a peculiar motion of her lip was able to conceal almost her whole face with the labret. Kotzebue (1830, p. 2:52) observed that when a woman ran, the ornament flapped up and down to the extent that it would knock against her chin and sometimes even her nose. Langsdorff (1814, p. 2:116), the practical physician, even pointed out that it was anatomically impossible for the fair sex of this region to receive a kiss.

Considerable conflict appears in the early narratives about when the incisions in the lip were made. The most probable explanation for this apparent confusion is that different Tlingit bands had differing practices. Some held that the incisions were made in infancy (La Perouse, 1799, p. 2:357; Lisiansky, 1814, p. 225; Suria, 1936, p. 255; Vancouver, 1798, p. 2:408), while others insisted that they were made at the age of two (Portlock, 1789, p. 189) or at puberty (Dixon, 1789, p. 187). There was general agreement, however, that once made, a copper or other metallic wire was placed in the hole to prevent healing until the labret itself was inserted, usually at around the time of puberty (Dixon, 1789, p. 187; Portlock, 1789, p. 189). Vancouver (1798, p. 2:408) felt that the wire so corroded the flesh that the incision gradually enlarged itself during childhood. From his personal observation he

found that "this cruel treatment was attended with the most excruciating pain." Needless to say, the initial incisions must also have been painful, especially when they were made in puberty. Erman (as cited in Krause, 1956, p. 98) had the opportunity to observe the twelve-year-old daughter of a chief who had just had the procedure performed. She was sitting quietly on top of a ceremonial house for all passers-by to see. The cut no longer bled but was gaping slightly in the center. Labrets were in general use among the Tlingit throughout southeastern Alaska, except perhaps in Yakutat (De Laguna, Ridderl, McGesin, Lane & Freed, 1964, pp. 163-4), and with minor modifications among the Haida (Dall, 1884, p. 88; Niblack, 1888, p. 257).

Nose ornaments were also widespread among the Indians of southeastern Alaska, but again the picture is confusing. In some areas both male and female infants apparently had their nasal septum perforated (e.g. Lisiansky, 1927, p. 256; Suria, 1936, p. 255) while in others the operation was limited to males only (Holmberg, 1856-63, p. 300; La Perouse, 1799, p. 1:401). As the child grew older, several types of ornament were inserted in the aperture, including a nail-like object, feathers (Suria, 1936, p. 255), silver rings (Holmberg, 1856-63, p. 300), or a variety of items made from bone, wood, copper, or even sharks' teeth (Niblack, 1888, p. 257). Both Tlingit and Haida shamans sometimes used a bone nose ornament as part of their ceremonial regalia (Swanton, 1905, p. 40; n.d., p. 464).

Ear ornaments were usually restricted to men (Portlock, 1789, p. 288) and commemorated important deeds, such as the number of potlatches an individual had given (Krause, 1956, p. 96). Sharks' teeth, shell, feathers, and red yarn were among the decorative materials used (Holmberg, 1856-63, p. 300). Around Yakutat Bay, however, women were known to wear ear ornaments, including bits of shell and beads (Ismailov & Bocharov as cited in Ricks, 1963, p. 27). Although some perforations of the ear lobes were obviously made in adulthood, others were made at a ceremonial feast for children. The piercing was done with a thorn while all present emitted a loud "ssssss" to help ease the pain. The Haida Indians also perforated the ear lobes of children as part of their naming ceremony (Krause, 1956, pp. 165, 210).

Tattooing was not a prominent feature of Tlingit culture, although a few early visitors made reference to the practice (Fleurieu, 1801, p. 2:218; Ismailov & Bocharov as cited in Ricks, 1963, p. 27). Among the Haida, on the other hand, tattooing was a fine art. The arms, thighs, calves, and trunk, but never the face, were often tattooed with the family crest, the design being accomplished by rubbing charcoal into superficial cuts. Both sexes received the designs at public naming ceremonies (Krause, 1956, p. 208; Niblack, 1888, p. 370).

Maturation

Tlingit rituals associated with the first menstrual period were harsh indeed. The girl was secluded for as much as a year in a tiny rude shelter built some distance from the family dwelling. The hut was constructed of evergreen branches and had one barred opening facing the sea and another facing the street (Krause, 1956, p. 152; Niblack, 1888, p. 370). The girl's face was smeared with charred fungus and she was required to wear a special cloak,

hood, or broad-brimmed hat that prevented her from looking at, and thus contaminating, the sky (Holmberg, 1856-63, p. 320). She was permitted to leave the hut for only brief periods at night, always while wearing her special headgear (Krause, 1956, p. 153). During the seclusion year the girl ate only what her mother or a female slave brought her, and could suck only small amounts of water through the hollow wing bone of an eagle. No other comforts were allowed and the hut was apparently not cleaned (Holmberg, 1856-63, p. 320). The girl was expected to occupy her time diligently pursuing womanly tasks to prepare her for married life ahead (Langsdorff as cited in Niblack, 1888, p. 370). At the conclusion of her long seclusion, the relatives of the young woman arranged a great celebration, at which she was presented to the guests decked out in fine new clothing, sometimes made even of sea otter skin. The slave who had assisted her to dress was given her freedom and the old clothing was destroyed as a symbol of her former condition (Holmberg, 1856-63, p. 321). The Tlingit believed that the failure to observe such customs would result in many misfortunes, including poor fishing, absent game, storms, and fatal accidents (Kaminskii, 1985, p. 48).

The Haida had similar customs but with important variations. The Haida girl was secluded for only 20 days, although perhaps for much longer in earlier times, and stayed in a screened-off portion of the family dwelling. She was required to fast and to drink as little water as possible. She could not laugh or talk, lest she acquire bad habits in later life. The girl could only leave the house by a special door and if she should meet a man she had to cover her face (Krause, 1956, p. 210; Niblack, 1888, p. 370; Swanton, 1905, p. 48).

Despite their rigid customs for the first menses, the southeastern Alaskan Indians did not make a big issue of subsequent periods. The woman was considered unclean at this time and was confined to a special hut, to avoid coming in contact with others during her days of bleeding. Failure to comply with these restrictions could result in storms, poor hunting, or disease affecting the community (Drucker, 1955, p. 174; Krause, 1907, p. 153; Willard, 1884, p. 178-9).

Old Age, Dying, and Death

The Tlingit, according to an early observer, were not particularly long-lived and rarely lived to the age of 60 (La Perouse 1799, 1:405). Infant mortality was high, according to another, but those that survived the hazards of early childhood often lived long and healthy lives (Blaschke as cited in Krause, 1956, p. 103). Those who did live to an advanced age were attended with great care by members of the community (Khlebnikov, 1976, p. 27).

When the imminent death of a sick person was recognized, the family washed him and dressed him in his best clothes, in part because it was considered dangerous to touch the corpse after death. The person was then wrapped in fine blankets and surrounded by whatever possessions were deemed to be useful in the next world (Kaminskii, 1985, p. 77).

The Tlingit had little fear of pain and death except for death by drowning. The bodies of drowning persons were rarely recovered and thus could not be afforded the proper funeral ceremonies. Such an unfortunate individual could never be utterly free from earthly impediments (Willard, 1884, p. 260). The body of a dead slave was consigned unceremoniously to the sea, as the carcass of a dog would be (Holmberg, 1856-63, p. 323). Slaves, in fact, might suffer an even more grisly fate, since they were often expected to die with their masters in order to serve them in the next world. Such individuals died in a manner similar to that of his or her master, although if the master's death resulted from illness, the slave's neck might be crushed under a heavy log (Krause, 1956, pp. 163-164). According to one account, slaves were buried alive with their master's body (Schabelski as cited in Krause, 1956, p. 158).

The usual Tlingit or Haida funeral practice was cremation, one of the underlying beliefs being that thus no part of the body could be used for sorcery (Gunther, 1972, p. 181). For three or four days following death, the relatives of the deceased gave a feast, characterized by wailing, dancing, rhythmic chanting, and the presentation of lavish gifts to the guests, all of this in the presence of the corpse propped against the rear wall of the house (Krause, 1956, pp. 156, 26, 279n). The cremation took place on a pyre constructed of heavy logs. The corpse was removed through a special hole made for the purpose in the back wall of the house. It was accompanied to the pyre by a live dog, which was supposed to carry with it the last traces of the illness which had caused death (Krause, 1956, p. 157). Once the pyre was lit, friends and relatives crowded around weeping and wailing, some so close to the flames that their hair was singed (Holmberg, 1856-63, p. 324). When the fire had burned itself out, a few women returned to remove the charred bones, which they placed in a small wooden box. This in turn was set in a grave house, a miniature wooden structure erected on poles in the cemetery (White, 1880, p. 36). A few days later the mourning rites were concluded with the presentation by the relatives of a few gifts to those who had been especially helpful (Holmberg, 1856-63, p. 324).

The death of a shaman was handled in a completely different manner. After death the body was moved each day to a different corner of the house, while relatives and friends fasted. On the fifth day the mourners dressed the corpse in all the finery of a shaman and bound it to a special board. Elongated pieces of bone were fastened to the hair and inserted into the perforated septum of the nose. They then covered the head with a special basket made from branches and placed the body in a sitting position in a large elevated grave house located near the water. Every person who passed such a grave would throw a piece of dried salmon into the sea as an offering (Holmberg, 1856-63, pp. 351-352). At Yakutat there is some evidence that the corpse was decapitated and the head and body placed in separate boxes, with the former suspended from poles lashed together (De Laguna et al., 1964, p. 35; Dixon as cited in Niblack, 1888, p. 351).

Traditional Medicine

Causes of Disease

An early Tlingit myth tells how Raven, weary from flying a long time, fell exhausted on a stone and lay there unconscious, thus originating all of mankind's sicknesses (Krause, 1956, p. 177). Raven was supposed to have

passed on certain of his magical skills to witches or sorcerers, who were able to cause illness in other individuals. Such men or women tried to obtain material from their intended victim, such as hair, spittle, a morsel of her or his food, or even the dirt scraped from the body. They took these substances to a graveyard and mixed them with remains of the dead, while performing appropriate spells and incantations. After a suitable interval the victim became ill in the part of the body from which the substance had been obtained (Krause, 1956, p. 200). Another technique of the sorcerers was to place a piece of a corpse, such as a hair or a spicule of bone, into the intended victim's food in order to make him ill (Oberg, 1966, p. 220).

According to Lisiansky (1814, p. 243), the Tlingit believed that the creator of all things, when angry, sent down diseases on his people. Wicked spirits could also inflict harm through evil shamans, or sorcerers. A sorcerer was also believed to be able to imbue an inanimate object with an evil spirit and then send it abroad to be the agent of disease. Such an object could be physically real, but more often it was a magic spear or arrow that could be seen only by a shaman, although no less real to them as a cause of illness. Such intruded objects were thought to cause paroxysms of pain or convulsions (Dall, 1870, p. 426; Drucker, 1955, p. 159; Oberg, 1966, p. 220). Another cause of illness was loss of the soul, which might be swallowed by a sorcerer as he passed behind the victim, or might be carried off to a noxious place such as a graveyard or the deep forest (Goddard, 1924, p. 119). A soul might even leave the body spontaneously, as after a severe fright (Lantis, 1963, p. 3).

Finally, the breach of a taboo, either by the victim or by someone else, could be the cause of sickness. Here the spirits themselves brought illness because of their anger with the human's lack of due respect. Thus, one who has broken a taboo could sometimes be the agent of misfortune for the entire community (Drucker, 1955, pp. 159-160; Willard, 1884, p. 178).

Healers

The shaman played an important part in the daily life of the Tlingit and the Haida. He was a man of influence, prestige, and often wealth in the community since he acted as sole mediator between ordinary human life and the spirit world which controlled it. Using various techniques the shaman was able to predict the weather, foretell success or failure in fishing, and, most important for our purposes, determine the cause of illness, predict the outcome, and often effect a cure (Krause, 1956, p. 194). Because of these powers, the shaman was held in considerable respect, although he was probably more feared than loved (Kotzebue, 1830, p. 2:58). His prestige depended on the number of spirits he could control, for each of which he possessed certain charms, songs, or dances (Jackson, 1880, p. 99).

An individual usually became a shaman by inheritance from his father or grandfather, who bequeathed many of his ceremonial objects such as masks, charms, amulets, and rattles to his offspring (Holmberg, 1856-63, p. 349). The would-be shaman, of course, needed more than heirlooms to practice the arts; he also needed a special turn of mind, or disposition. He would avoid human company, talk to himself, and wear his hair in tight braids. He even

avoided physical comfort, such as food delicacies or a warm house (Kaminskii, 1985, pp. 82-83). Father Veniaminov (1984, p. 401) tells of a shaman with two sons, one of whom wanted to become a shaman but was unable to enter into communion with the spirit world. Another son, however, who apparently had other career plans, was relentlessly pursued by spirits until he became a shaman in spite of himself, and a famous one at that.

An apprentice shaman retired for a period of time into the forest or onto a mountain far from human habitation. There he lived off the roots of devil's club for two to four weeks, or for however long it took for the spirits to make their appearance. At last the secret powers of the shaman were carried to him through the tongue of a land otter. After uttering the cry "Oh" in four different pitches, the candidate killed the otter, cut out the tongue, and kept it hidden in a basket. This talisman had to be carefully protected, for therein resided the shaman's special powers. The otter's pelt was retained as a symbol of the shaman's calling but the flesh was buried. Those to whom the spirits were slow in coming resorted to a shaman's grave. There they spent the night with the corpse, taking one of its teeth or its little finger in their mouth to assist in calling up the otter's spirit. Finally the new shaman, worn out with hunger and fatigue, returned to the village to try out his newly acquired powers (Holmberg, 1956-63, pp. 349-350).

Throughout his life a shaman never allowed his hair to be cut or combed, except for the front part while he was in deepest mourning. He usually wore it hanging loosely in matted strands, or bound up in a knot on the back of the head (Krause, 1956, p. 194). His appearance was otherwise unremarkable, except that his clothing was often finer than that of others. Such clothing reflected that most successful shamans were wealthy, since they were paid for their services in furs, dried fish, and like commodities. If a patient died, however, the shaman was compelled to return any payments made on account (Niblack, 1888, p. 349).

The shaman kept his paraphernalia in a special box or small chest. Included might be his otter tongue, parts of a shaman's corpse, various amulets, talismans, and perhaps some of the objects used in his séances, such as rattles and masks (Kaminskii, 1985, p. 84).

Haida shamans usually passed their calling to maternal nephews rather than to direct descendants. The novice received most of his instruction from his uncle, beginning with the methods of communing with weak spirits (Swanton, 1905, p. 38). A Haida shaman also wore his hair dirty and uncombed, often with a bone through the hair and another through the septum of the nose. In addition he also usually wore an elaborately carved bone necklace (Drucker, 1955, p. 160).

The herbalist was another type of healer besides the shaman who practiced in southeastern Alaska. Although shamans themselves sometimes used medicinal plants as an adjunct to their ceremonial cures (Kotzebue, 1830, p. 2:58; Niblack, 1888, p. 349), such empirical remedies were usually the province of an old woman skilled in the art. Such women did not enjoy a high reputation in the community (Khlebnikov, 1976, p. 29).

Magico-Religious Healing

A shaman's main task in healing sickness was to identify and remove the evil influences thought to be the cause of the disorder. To this end he used charms, songs, and dances, and when appropriate he removed an intruded object, recovered a wandering soul, or, most often, identified a sorcerer who was thought to be the source of the trouble.

The power of charms or amulets lay not in the objects themselves, but rather in the magic they acquired by how they were found, the shape in which they were carved, or how they were consecrated (Niblack, 1888, p. 349-350). Amulets were often made by Tlingit shamans and distributed to their clients to bring them luck or to ward off sickness. Some such objects were used by adolescent girls and widows to scratch their skin, since they were forbidden by taboo from using their fingers for this purpose (De Laguna, 1960, pp. 122-123).

A shaman possessed many ceremonial objects of his own that he used in his performances. Among these might be rattles, drums, and masks (e.g. one for each spirit), which he had inherited from his father or grandfather (Goddard, 1924, p. 118; Holmes, 1909, p. 269). Some objects were used in ways now unclear to us. For example, Swanton described a shaman's carved box that contained a second inner box with *medicine*, such as bits of abalone shell, dentalium, iron, the corner of a Chilkat blanket, and several plants. Along with this box was a carved wooden comb depicting an eagle or thunderbird (Swanton, n.d., p. 468).

The most conspicuous method used by shamans to effect a cure was their singing and dancing, the purpose of which was to establish communication with the spirits. During his apprenticeship the shaman had had to spend long months of practice to ensure that his chants and gyrations exactly matched the beat of the drum (Krause, 1956, p. 200). During a healing ceremony, shamans attested that spirits with many different faces appeared to them. It was the shaman's task to put on the distinctive mask of each spirit he saw and to change his ornaments to match each spirit's attire (Holmberg, 1856-63, p. 353). Finally, when the right spirit appeared, invoked by the proper chant and dance, the shaman recognized him and became empowered to remove the cause of the illness (Drucker, 1955, p. 160).

The dance itself might consist of circling the fire repeatedly in the direction of the sun's course, while rattling and making repeated passes at the sick person, all in rhythm with the drum. He would blow in the patient's mouth or nostrils, foam at the mouth, and generally work into frenzy (Niblack, 1888, p. 349). Suddenly he would stop, look at the drum and cry out, after which he announced his conclusion about the illness and its cause (Dall, 1870, p. 427). At the climax of the performance the shaman, aided by his helper spirit, was able to overcome the evil spirit causing the disease. He thus might pull out an imaginary spear or arrow from the victim's body (Goddard, 1924, p. 119; Swanton, n.d., p. 464). In other cases the shaman might suck the illness from his patient using a special hollow tube made from the wing of a bird. The offending object would then appear in the shaman's mouth, having been hitherto visible only to the shaman himself (Goddard, 1924, p. 117; Swanton, 1905, p. 40).

In some cases the shaman was able to retrieve a wandering soul and restore it to its possessor. During his dances, or among the Haida while drinking salt water, he might see the disembodied soul and send his helper spirit in pursuit. Sometimes the soul might be in a graveyard, or in the deep forest, or even in the stomach of an evil sorcerer. The shaman caught the wandering soul between his palms and then restored it to its rightful owner (Goddard, 1924, p. 119; Lantis, 1963, p. 3).

Perhaps the most dramatic moment of a shamanistic performance was when he named a sorcerer who had bewitched the unfortunate victim. The accused might be a rival shaman, or a totally innocent slave, old woman, or even a young girl from the community. Such an individual was immediately sought out and became subject to several gruesome forms of punishment. The accused was seized, tightly bound, and dragged to a small hut where he or she was kept without food or water, and sometimes tortured until admitting guilt by revealing where the sick person's possessions had been hidden. The alleged sorcerer was then taken to the beach, where he or she was forced to purify the bewitched objects in sea water in order to permit the patient to recover. The sorcerer, if not of a powerful family, might then be killed (Krause, 1956, pp. 200-201). Several instances are known from the latter half of the 19th century of shamans naming sorcerers and then attempting to have them killed. Some of these were barely rescued from a grisly death by the Russian or American authorities (Beardslee, 1882, pp. 58-59; Pierce, 1972, p. 24). The victim was often left bound on the beach to be drowned by the incoming tide or to die of exposure (Kaminskii, 1985, p. 90; Oberg, 1966, p. 220; Scidmore, 1885, p. 42). Other methods included throwing the presumed sorcerer bound into a pit, dragging over the ground, or choking between two logs (Oberg, 1966, p. 220; White, 1880, p. 35).

Among the Haida the sorcerer was identified by having three judges take emetics and purgatives, apparently to clear their minds, and then observe a woodmouse run in a cage. As the names of possible sorcerers were spoken one at a time, the mouse would nod its head at the appropriate time (Niblack, 1888, p. 348).

Empirico-Rational Medicine

The administration of physical remedies was considered to be a less important and certainly less efficacious method of treatment usually reserved for minor ailments and injuries. The potency of many empirical remedies, moreover, seemed to depend more on their magical associations than on any inherent therapeutic efficacy (Swanton, n.d., pp. 445-446). Their virtues, for example, might derive from the source of the substance, or how it was prepared and compounded, or with what charms and incantations it was administered (Niblack, 1888, p. 349).

The most familiar medicinal plant seems to have been the devil's club, which was found everywhere in the forests of southeastern Alaska. Known as *suxt* to the Tlingit, the plant belongs to the Ginseng family and is related to English ivy and Virginia sarsaparilla. Its therapeutic value, according to one legend, was discovered when a member of the Kake tribe observed two bears chewing on the roots to soothe their battle wounds (Justice, 1966, p. 36). The plant had many uses in early times. An infusion made from the bark has violent emetic properties and was sometimes

used to *purify* an individual for the hunt (Lantis, 1963, p. 3). Weaker infusions were used as a general tonic and for such problems as arthritis, black eyes, stomach ulcers, and constipation. A preparation made from chewing the raw inner bark was spit directly on open wounds as an analgesic, while strips of the inner bark were sometimes laid side by side over the site of a fracture in order to afford pain relief. Dried powder from the same inner bark was mixed with pitch and sprinkled directly on small abrasions or open sores, as was ash from the burned plant (Krause, 1956, p. 284; Niblack, 1888, p. 349). Other forms of the plant were used for respiratory infections (McGregor, 1981, p. 66).

Other medicinal plants used by the Tlingit included a species of valerian, or heliotrope, which was considered an effective remedy against sorcery (Langsdorff, 1814, p. 2:134). Among those identified by Dr. Eduard Blaschke in the 1830s were spleenwort for catarrh, sweet cicely for cough, wormwood for pleurisy, locoweed for colic, and an extract of American laurel applied externally for skin ailments (as cited in Krause, 1956, p. 284).

Non-plant substances were also used for healing. For example, hooligan oil derived from the candlefish was a popular remedy for earaches, respiratory, and gastrointestinal illnesses (McGregor, 1981, p. 66). Shark oil mixed with a certain plant was thought to be useful for treating open sores. For headache the hollow stem of a giant kelp was held against the ear while the other end was laid on a hot stone to produce *medicated* steam (Krause, 1956, p. 284). Sea water itself was sometimes used as an emetic (Swanton, 1970, p. 446). A remedy enjoying a high standing all along the coast was bear's gall, which was used primarily on painful rheumatic joints. The reputation of this remedy was so great that it was fetching a high price in the 1880s as far away as San Francisco (White, 1880, p. 37).

Certain types of skin disease were treated by bathing in the warm mineral springs found here and there in southeastern Alaska, the most famous of which was located a few miles south of Sitka. The Tlingit had been resorting to these soothing waters long before the first European description in 1805 (Lisiansky, 1814, p. 231).

The Haida also used a limited number of medicinal substances, most notably devil's club and hooligan oil. As with the Tlingit, however, it seems clear that the magical practices associated with their collection and preparation counted for more than the inherent therapeutic value of the medicine itself (Niblack, 1888, pp. 349-50; Swanton, 1905, p. 44; n.d., p. 445).

The surgical arts were not highly developed in southeastern Alaska, except for the obvious skills required to prepare for the insertion of body ornaments. Yet the Indians of this area were very warlike and must have had frequent need for the treatment of wounds and other injuries, presumably by the old woman herbalists. One remedy used to staunch bleeding was the application of bird down (Niblack, 1888, p. 349). Very little information seems to be available on surgical practices that were well-known in other parts of Alaska, such as lancing, piercing, bleeding, or suturing. Niblack (1888, p. 349) noted that "scarification" was sometimes resorted to, but gave no examples of its purpose or use. The missionary S. Hall Young (1927, p. 105-106) reported late in the nineteenth century the case of a sixteen-year-old boy whose broken leg was splinted and properly dressed by a

local Indian practitioner. Another youngster, however, was left crippled when an old woman repeatedly stabbed a fractured leg "to let out bad blood."

CHAPTER 6. THE ATHAPASKAN INDIANS

The Setting

The enormous interior of Alaska was the traditional home of the Athapaskans, the people of the rivers and boreal forests. On the east, these Indians ranged far into the Canadian sub-arctic regions and the northern parts of today's Prairie Provinces. In Alaska their land was bounded on the north by the drainage of the Porcupine, Chandalar, and Koyukuk Rivers, all flowing southward into the mighty Yukon. On the west they lived along the Yukon River as far as the mouth of the Innoko, and on the Kuskokwim to the mouth of Stony River. To the south a group of Athapaskans inhabited the shores of Cook Inlet and the Susitna valley. Further eastward they ranged through the Tanana Valley and the drainage of the middle and upper Copper River.

The topography of the interior includes, in addition to these vast river systems, two great mountain ranges and several smaller ones. On the northern fringe is the lonely Brooks Range trending east and west, while to the south of the Yukon-Tanana River valleys lies the massive Alaska Range that includes among its wonders Denali, or Mt. McKinley at 20,320 feet the highest point in North America, which was sacred to the Athapaskans.

The climate of this region is continental, characterized by short warm summers and long cold winters. Precipitation ranges from 10 to 20 inches annually. Winds are light and prevail from the north. January temperatures average -11°F in Fairbanks and a mild 60° F in July. The Athapaskans lived largely in the forested river valleys known as taiga, composed of white spruce, black spruce, cottonwood, birch, and aspen dominating over stands of tamarack, willow, and poplar. There are also large areas of boggy muskeg in the lowlands, characterized by scant tree growth but abundant moss and grassy meadows surrounding ponds and small lakes. At higher elevations and more northern latitudes the true tundra prevails (Hosley, 1981, pp. 533-534).

The interior is rich in wildlife. Moose and caribou are plentiful, together with their predators, including the wolf. Both grizzly and black bear range the forest while Dall sheep and mountain goats are found at higher elevations. Among smaller animals beaver, muskrat, red and arctic fox, squirrels, and snowshoe hares are abundant. In fewer numbers mink, marten, wolverine, and lynx may be found. In the meandering river wetlands known as the Yukon Flats, millions of migratory waterfowl nest, including ducks, geese, and swans. Rock ptarmigan and spruce grouse are important food sources in the uplands. Other conspicuous birds of the interior include hawks, owls, ravens, loons, woodpeckers, robins, and several species of warblers.

All five species of the Pacific salmon may be found spawning in the major river systems of the interior. In addition several varieties of whitefish, trout, and other freshwater fish are plentiful.

The Athapaskan Indians are a large linguistic family of peoples which inhabit much of the subarctic regions of Canada and Alaska. The various divisions are not truly tribes, since there is no significant tribal organization, nor

are there marked cultural distinctions among them. Furthermore, although each group had a more or less distinct territory, there was some overlap.

The Athapaskans of Alaska have been divided into eleven groups on the basis of language (Simeone, 1982, pp. 3-7). Along the upper Yukon were the Han, bordered on the north by the Kutchin, who inhabited the Chandalar and Porcupine Rivers as well as the segment of the Yukon near present-day Fort Yukon. In a huge area to the west and south along the Yukon, including the lower Koyukuk River drainage, were the Koyukon. To the west and south were the Holikachuk, along the upper reaches of the Innoko River, and the Ingali: who ranged along both the middle Yukon and the middle Kuskokwim and formed a long buffer with the Yupik Eskimos. The Kolchan, or Upper Kuskokwim group, lived near the sources of that river and its tributaries. The only Athapaskans with a maritime culture were the Tanaina, who inhabited the shores of Cook Inlet, the upper reaches of the Stony River, and the Susitna Valley. Further east were the Ahtna, who dominated the Copper River and its tributaries, except for the river delta, which was controlled by the now nearly extinct Eyak Indians. Finally, the Tanana River valley was home to three distinct groups, the Upper Tanana, the Tanacross, and Tanana band proper. Population figures for the Athapaskans are very uncertain, but one early estimate for the principal groups of the Alaska plateau (i.e. Tanana, Koyukon, Ingalik, and Kolchan) was under 4,000 (Hosley, 1981, p. 534).

All Athapaskans shared a similar culture, although details varied somewhat depending on the climate, geography, and particularly the subsistence patterns. All depended on a cyclical pattern of hunting, trapping, fishing, and gathering, according to the season. Even before direct contact with Europeans, many Athapaskans had developed trade relations with neighboring Indians and Eskimos for essential goods not otherwise available to them.

The principal food resource of the Indians of the Yukon and its lower tributaries, the Kuskokwim, the Copper River, and Cook Inlet was salmon, but beyond the reach of spawning salmon they depended heavily on the woodland caribou. Supplementing these sources seasonally were moose, various kinds of freshwater fish, lamprey, waterfowl, hares, and many types of berries. Later winter and early spring were often times of food scarcity and sometimes hunger.

Athapaskan dwellings were simple, because most of the people were nomadic and did not invest great effort in buildings. One typical pattern of semi-permanent winter house consisted of a circular reinforced frame of curved poles, leaving a smoke hole at the apex, and covered with sewn moose or caribou hides. Summer houses were rectangular, with parallel poles driven into the ground to make an inside and outside wall between which were laid strips of birch or spruce bark. The roof was flat or gabled and included a smoke hole. Other types of house construction included log cabins and a form of semi-subterranean moss house used in the more northerly regions. For more temporary shelters, simple brush lean-tos or skin teepees were used (VanStone, 1974, pp. 32-35).

Clothing consisted of a buckskin parka, or long shirt, which was usually pointed in front and behind and often decorated with porcupine quills. Beneath this outer garment the people wore buckskin breeches, with

undergarments of rabbit skin and skin moccasins on the feet. In bitter weather, outer fur garments and a fur cap were added. Women's clothing was similar to that of the men. Winter garments were made of skin with the fur remaining, whereas in summer dehaired skin was used (Hosley, 1981, p. 539).

The social organization of the Athapaskans was relatively simple. Each small local band, consisting of a few nuclear families, delegated authority by common consent to a chief, who had little real power. At the larger group level, or regional band, no formal organization existed, although sometimes smaller bands joined together for the purposes of the hunt or for warfare. The latter usually involved raids on non-Athapaskan neighbors such as the Eskimos.

The Athapaskans had a complex mythology and delighted in storytelling. They believed in many spirits which influenced every aspect of their lives. Animal spirits, in particular, were accorded special respect to ensure good hunting. Evil spirits and ghosts were the source of worry and sometimes outright terror. The principal group ceremony was the potlatch, generally construed to be in honor of the dead. This celebration often lasted for a week or more and included much feasting, dancing, and good times, ending with the lavish distribution of gifts in accordance with the wealth and prestige of the host (Guedon, 1981, pp. 577-581).

Health and the Stages of Life

Pregnancy, Childbirth, and Infant Care

Since a wealth of information is available on the health aspects of daily life of the various Athapaskan groups, it will be necessary to limit this discussion to major points of similarity, with emphasis on the Ingalik, for whom particularly detailed information exists.

A woman knew she was pregnant when her menses ceased and she began having nausea. Often the secret was shared first with her mother rather than her husband. Throughout her pregnancy, even when it became evident to all, she continued all her regular activities, even working harder at the end in the belief that she would thereby have an easier delivery. In the last few months, she often wore a broad tanned belt under her abdomen for support (Osgood, 1958, pp. 170-171). During pregnancy both the woman and her husband were subjected to many food taboos. For example, in the earlier stages they were to avoid tough meat and the head, legs, or marrow fat of large animals. Liquids were restricted in amount and had to be drunk cold. Acceptable food included birds and small game. In the last months of pregnancy the woman was permitted only small pieces of meat of the lower legs of animals (McKenna, 1959, p. 140; 1965, p. 57, 85).

Once labor pains began, the woman called in one or more, older women of the village, including perhaps her mother or grandmother, and packed her husband off hunting, or at least encouraged him to stay out of sight (Osgood, 1936, p. 146). The woman then retired to a portion of the main dwelling that had been specially

prepared by having an area hollowed out and lined with moss for reception of the baby. Other groups, such as the Tanaina, erected a small brush shelter for the woman in childbirth (Osgood, 1937, p. 160). Upper Tanana women sometimes delivered in the open, away from the camp, if the weather was not too severe (McKenna, 1959, p. 140).

In the early stages of labor an old woman would sing the *caribou song*, reputed to be helpful since caribou were thought to calve easily. The mother was expected not to cry out in pain and would be chided if she did. When the woman began to push, signifying the second stage of labor, she squatted over the mat of grass. Her hair was unbraided and allowed to hang free to promote an easy birth. During the final moments before birth, the midwife might assist by grasping her from behind with her arms under the mother's arms and over her breasts (Osgood, 1958, p. 171). A Koyukori woman knelt to deliver (Dall, 1870, p. 196), as did a Kutchin (McKenna, 1965, p. 57). An Upper Tanana woman might grasp a horizontal bar suspended from above in order to provide additional support (McKenna, 1959, p. 140).

After birth the midwife took the newborn and tied the cord with a piece of sinew an inch or more from the body (McKenna, 1959, p. 140; Osgood, 1971, p. 46). She then tied it again a little further on, cutting the cord between the ligatures with a small stone woman's knife (Osgood, 1958, p. 171). The stump was then rubbed with soot (Clark, A. M., 1981, p. 590) and later, when it fell off, the navel was treated with spruce gum (Osgood, 1971, p. 45). The dried cord itself was saved and sewn into a small skin bag for use in later years as an amulet to ward off sickness and danger (Clark, A. M., 1981, p. 590, McKenna, 1959, p. 140). Immediately after the child was born, the attendant massaged the abdomen to expel the placenta (McKenna, 1959, p. 140), which fell into a birch bark basket containing the soiled grass that had lain beneath the mother. This grass was changed each day and added to the basket until the latter was filled, at which time it was tied with a spruce root or willow thong, and taken deep into the woods to be hung in the fork of a tree or buried (McKenna, 1959, p. 140; Osgood, 1958, pp. 171-172).

Once the infant and placenta had been delivered, the midwife pressed an old parka between the mother's legs while she was still in the squatting position. She then tied a soft skin band around her legs and back to compress the abdomen and thus prevent bleeding. The new mother was propped up by tucking other old garments behind her back and around the sides, and was kept in this uncomfortable position for as long as twelve days, even sleeping tied up. This prolonged immobility often led to swelling of the feet and even blistering of the skin of the posterior aspect of the legs that were in contact. When the skin bands were finally removed, the woman so stiff and lame she often could not walk upright for several more days. By the twentieth day the new mother was usually able to resume normal activities once more (Osgood, 1958, pp. 172-173). Other Athapaskan groups were rather less rigid than the Ingalik in the immediate postpartum period (McKenna, 1959, p. 140; Osgood, 1937, p. 160).

The father of the baby was also subjected to many sanctions. For example, among the Ingalik he was forbidden to hunt, fish, or even chop wood for 20 days after the baby's birth. If he went for a short walk, he had to lay a small stone on the baby and then remove it when he returned. Only during the height of the fishing season was he

permitted to tend his fish traps, providing someone sang certain incantations for him. He could eat no fresh meat or fish but had to subsist on dried fish and fish eggs. After 20 days he underwent some purification rites, following which he could return to his normal activities (Osgood, 1958, pp. 173-174).

Among the Upper Tanana, husband and wife slept apart for 100 days after their first child, this period being reduced by 20 days for each subsequent child. During this time, the mother had to eat alone, using separate utensils, and was not permitted to scratch herself (McKenna, 1959, p. 140).

The Ingalik midwife washed the baby with urine shortly after birth, using a caribou skin rag. A man's urine had to be used for a male child. The infant was then wrapped in a parka and observed for spontaneous vomiting. If results were not forthcoming, the midwife induced vomiting with her finger, after which the infant was first put to its mother's breast. Two or three days later the child was dressed in finely tanned skins and placed in a birch-bark cradle (Osgood, 1958, p. 174). A Koyukon infant was rubbed with grease before being washed and put to the breast (Dall, 1870, p. 196). After washing a Han infant was always dressed in rabbit skins (Osgood, 1971, p. 46).

The infant spent its first few months in the birch-bark cradle, the lower half of which was lined with ashes and moss to act as an absorbent diaper. The baby usually lay directly on rabbit skins, with the fur toward the skin. No constraints of any kind were used until the baby was old enough to try to get out of the cradle, at which time a hide strip was tied around the waist (Osgood, 1958, pp. 144-145). Some Athapaskan groups used a carrying cradle, where the child spent much of his life until he was able to walk. The cradle was lined on the inside with soft dry grass and on the outside with absorbent dry moss (McKenna, 1959, p. 141). The Tanaina carried their infants either in a birch-bark cradle chair or in a sealskin bag lined with moss and slung over the shoulder, or perhaps temporarily hung from the branch of a tree. The infant wore an outfit made from caribou skins and with the extremities sewn up (Osgood, 1937, p. 161).

Children were breast-fed for three to as much as six years (Dall, 1870, p. 196; Osgood, 1958, p. 176). The mother fed the infant on demand, while lying in the horizontal position, and ate large amounts of fish-egg soup in the belief that it would ensure a good milk supply. As the child grew older, the quantity of milk was cut down and he was given a fish skin or caribou skin bag to chew on, or perhaps the fat from a moose bone (Osgood, 1936, p. 140). After learning to walk, he was given pre-masticated food, mashed fish eggs, and fat (Osgood, 1937, p. 161; 1958, p. 176). Wet nurses were not common but might be used when a mother had twins or when she died at an early age (Osgood, 1971, p. 47).

Infanticide was known in most Athapaskan cultures except possibly among the Tanaina (Osgood, 1937, p. 160). Most often it was due to family economic hardship or to the shame of an infant born out of wedlock (Osgood, 1936, p. 140), although rarely it was attributed to a mother who found her child "too much trouble." In the latter case, the husband was known to kill his wife in retaliation (Osgood, 1971, p. 47). Infanticide, when it occurred, usually took place immediately after birth, often with the help of the midwife, who might be the infant's grandmother. When delivery was completed, the cord was not cut, but instead the placenta was tied tightly over

the infant's nose and mouth. The infant was then wrapped in grass and bound into a birch-bark basket that was carried deep into the forest and tied up in a young spruce tree (Osgood, 1958, p. 195). Another method involved the mother *accidentally* sitting on the infant while squatting to give birth (Osgood, 1936, p. 140). Sometimes an expectant mother *went visiting* around the time the baby was due and then returned empty-handed (Osgood, 1958, p. 195).

Children were not harshly disciplined and rarely spanked (Osgood, 1936, p. 147; 1971, p. 47; Snow, J. H., 1981, p. 610). Parents generally treated their children with respect, although they might scold them or even switch them with willow branches. For older children an effective means of discipline was to have a group of adults discuss their behavior publicly (Osgood, 1936, p. 147). As with other Alaska Native cultures, young people were encouraged to increase their strength and stamina by such means as running or by drinking as little water as possible (Osgood, 1958, p. 183).

Ornamentation

The Athapaskans used relatively little facial ornamentation, except for the Ingalik, who wore labrets consisting of small stones or glass beads in a slit in the lower lip, or in holes at the corner of the lower lip (Glazunov as cited in VanStone, 1959, p. 43; Zagoskin, 1967, p. 244), in the style of their Yupik neighbors.

Nasal ornaments were more widely employed than labrets. The Upper Tanana and probably others pierced the nasal septum of both girls and boys at an early age and then inserted a small stick to keep the incision from healing. At maturity the stick was replaced by dentalium shells strung from one or more slender sticks or a copper ring (McKenna, 1959, pp. 85-86; 1965, p. 46; Zagoskin 1967, p. 244).

Ear ornaments were worn in two or three small perforations made at the same time the nasal septum was pierced. Dentalium shells were again a favorite, with the number of shells corresponding in some measure to the wearer's wealth. A poor man or woman might wear nothing at all, or perhaps only a feather, in the perforations (McKenna, 1959, p. 86; 1965, p. 46).

Tattooing was not extensive and used primarily among women. Han women wore a few vertical lines on the chin and a couple of horizontal lines below the knee (Osgood, 1971, p. 95). Upper Tanana women had a series of vertical lines on the chin and one or two horizontal lines on the cheeks. Sometimes they also displayed a few bars on the dorsal surface of the wrists (McKenna, 1959, p. 87), a site also used by Han men to indicate their prowess with the bow (Osgood, 1971, p. 95). Tattoos were usually applied around the time of puberty. Both the needle and thread technique and the pricking method were used, although the former seemed to be more widespread (McKenna, 1959, p. 87).

Maturation

The customs relating to a girl's first menstrual period were austere and complex and showed considerable variations among the various Alaskan Athapaskan groups. An Ingalik girl undergoing her first period was secluded for a full year in a corner of the house separated off by grass mats. During this time she had to keep a fur hood drawn over her head and wear a pair of small mittens joined by a band of fur extending behind her neck and holding her hands at the level of the breast. A black band was drawn with charcoal across her eyes from temple to temple, the same pattern used on a dead body. The girl was able to leave the house only by night and could not participate in any family activities. Her urine was disposed of in a place never frequented by men, because any contact with it would destroy their luck in hunting and fishing. At the end of a year the girl bathed, threw away her old clothing and donned a new set, including a special piece of caribou or moose skin ornamented with tassels around the head as a sign of maturity (Nelson, 1978, p. 41).

The girl spent much of her time in seclusion learning the arts of womanhood, such as sewing skins, cooking, doing beadwork, and making fishnets (Snow, J. H., 1981, p. 610). Her mother taught her these skills, instructed her in all necessary rituals, and cooked her meals. In general, the girl could eat only stale or cold food and could not partake of food prepared for the family's use. To eat of the family's warm soup, for example, was thought to cause the girl's hair to fall out and her face to become lumpy (Osgood, 1958, p. 183-6).

A Kutchin girl at menarche was isolated in a separate hut as much as a mile away from the family house. While outdoors she wore a special cowl fringed with caribou-hoof rattles to warn others of her approach (Slobodin, 1981, p. 524-525). Her food was brought cut into small pieces which had to be eaten with a stick, while liquids were sucked through a tube made from the wing bones of a bird (McKenna, 1965, p. 58). All her food was kept in separate containers. No fresh meat except liver was allowed (Osgood, 1936, p. 141). Among the Han the girl's father gave a banquet for the community before seclusion began (Snow, J. H., 1981, p. 508). She was then isolated under the care of a relative of her future husband. The hut was gradually moved closer to her family as the year went on. During this period she subsisted on dried salmon eggs, dried meat, berries, and soup made from caribou viscera (Osgood, 1971, p. 49). The Ahtna girl was isolated for 70 days in a separate brush hut. She was not allowed to eat, drink, or speak for the first three days, and had to spend at least ten days sitting in a very cramped position. Strings of caribou hide were bound around her wrists, elbows, knees, ankles, and fingers to keep the joints supple. After ten days she was permitted to bathe and again at 30 days, when she was moved to a brush hut nearer home. When 70 days had passed, and for the remainder of the year, she was expected to observe all food taboos and to wear a huge moose skin hood with a fringe over the eyes to protect all living things and the sky from her harmful glance (De Laguna & McClellan 1981, p. 658).

Less rigid were the Upper Tanana, who isolated the girl for only two or three months. She too, however, was obliged to observe certain food taboos for a further nine months before becoming eligible for marriage (McKenna, 1959, p. 143). An even easier time was had by a Tanaina girl, who might be secluded for as little as

seven days. The strictest taboo was that menstruating girl could not look anyone directly in the eye, lest she cause sickness (Osgood, 1937, p. 19).

For subsequent menses the various Athapaskan groups prescribed certain modes of behavior, though not as rigid as those for the first period. A number of food taboos had to be observed; for example, she was not permitted to eat fresh food or the meat of the mink, otter, lynx, marten, or bear. She had to prepare and eat her meals apart from the family, using special utensils (McKenna, 1959, p. 143; Osgood, 1958, pp. 187-188). She was not permitted to have sexual relations during her menses, or even look at a man (Snow, J. H., 1981, p. 610). Among the Han she could not even come within six feet of a man (Osgood, 1971, p. 50). The menstruating woman could not step over a man's legs, food, weapons, or snowshoes without contaminating them (Osgood, 1936, p. 141). In order to warn others of her condition she darkened her face with charcoal (Zagoskin, 1967, p. 244).

Rituals associated with the maturation of a boy were much less elaborate except among the Ahtna. A Tanaina boy of about 15 was sent alone into the forest for five days, whence he could return home to sleep only if unobserved by anyone else. During these initial five days he was not permitted to eat or drink at all and for a further five days he could only drink liquids through a hollow wing bone. Around Kachemak Bay this fasting was instituted after the boy's first successful hunt of a large animal (Osgood, 1937, pp. 162-163). Among the Upper Tanana a boy was restricted from eating porcupine or duck, lest he suffer from pimples. He also pulled out his first pubic hairs and tied them on a tree branch in order to become rich (McKenna, 1959, p. 143). The Han and Kutchin Indians prescribed that a boy reaching puberty wear a short, conical cap with a fringe that hung down over the eyes. He also had to avoid contact with fire or hot objects by wearing mittens. Dietary restrictions included the meat from young animals or from the head, legs, or marrow fat of any big-game animal (McKenna, 1965, p. 59). After his first kill the community celebrated with a feast in his honor (Osgood, 1936, p. 147; 1971, pp. 48-49).

Old Age, Dying, and Death

The hard struggle for existence took its toll on the Athapaskans. They seemed to age rapidly in appearance (Cantwell, 1889, p. 81; Herron, 1901, p. 69) and few lived to an advanced age (Brady, 1900, p. 59; Dall, 1870, p. 196). Old age was a time of declining powers, of inability to be a fully productive member of the community. Although some consideration was shown for the superior wisdom of years (McKenna, 1965, p. 54), by and large the elderly were considered more of a burden, especially for the nomadic bands, than in some other Alaskan cultures, and some tribes treated them with overt disrespect (VanStone, 1974, pp. 82-83). An elderly person was likely to have a more difficult time if he or she had no mature dependents. Such an individual was often relegated to a tent at the fringes of the village, where with difficulty he or she eked out a marginal existence (Slobodin, 1981, p. 525).

Abandonment of elderly persons seems to have been widely practiced in times of want, particularly when the band was forced to move camp. Sometimes old people asked to be left behind, especially if they were ill or infirm

(Osgood, 1936, p. 144). Their kinsmen would build a shelter for them and leave firewood and whatever food they could spare (VanStone, 1974, p. 83). Occasionally, the elderly person would insist that his companions kill him, the deed usually being accomplished by strangulation, with two cords being pulled in opposite directions. An old person might also hang himself by jumping from a tree with a noose around his neck (McKenna, 1965, p. 54). Senicide was by no means universal, nor was it undertaken lightly. Sometimes the elderly and infirm were faithfully pulled along on a toboggan as the band wandered in search of game (VanStone, 1974, p. 83). The Ingalik were said to have undertaken abandonment of the elderly only with great reluctance and under extreme conditions (Osgood, 1958, p. 148).

In general, death was awaited with resignation and equanimity, whatever the cause. It was a socially significant event, however, and its impact was strongly felt (VanStone, 1974, p. 83). Death involved the loss of the individual's spirit, or shadow. When it resulted from an accident, childbirth, starvation, murder, or even suicide, it was considered natural and was accepted as such. Other deaths, however, were attributed to sorcery or malevolence (VanStone, 1974, p. 84). Some believed that to live in a house where a person had died would cause others to die as well; hence an individual who was dying was usually moved outside the main dwelling to a separate tent or shelter (Grinnell, 1901, p. 39). Once death occurred, friends and relatives washed and dressed the body in new clothes and watched over it for several days while the spirit lingered nearby (De Laguna & McClellan, 1981, p. 658). The corpse was drawn into a squatting position with the palms of the hands against the cheeks and the wrists tied to the neck (Osgood, 1937, p. 166).

Both burial and cremation were practiced, depending on the group and in some instances the status of the deceased individual. Zagoskin (1967, p. 248) noted that the Indians of the middle and lower Yukon burned their dead, collected the ashes in a small wooden or bark container, and brought them to a kind of cemetery. It was probably the sole method of the Tanaina, but it was also sometimes used by the Upper Tanana, Chandalar Kutchin, Ingalik and others (VanStone, 1974, p. 85). Burial was the primary method of the Ingalik for disposal of the dead. A wealthy individual was placed in a coffin, and then an elaborate ceremony took place in the men's house. Poorer families buried their dead in a simple grave four or five feet deep, with the body in a sitting position facing the sunrise (Osgood, 1958, p. 149; VanStone, 1979, p. 38). Platform burial was also known (Petroff, 1882, p. 162).

Mourning was ritualized among the close relatives and a series of taboos governed behavior for a couple of weeks after death (McKenna, 1965, p. 85). A few months or even a few years later, the relatives of the deceased gave a potlatch, an elaborate feast in which the host presented food and gifts to the members of the community and particularly those who had cared for the deceased after death (Guedon, 1981, p. 578; VanStone, 1979, p. 38).

Traditional Medicine

Causes of Disease

The various Athapaskan groups of interior Alaska had a similar approach to healing, although some geographic and cultural differences are apparent. Healing was principally in the realm of the shaman, who approached illness from the magico-religious perspective. Empirical methods of treating illness largely belonged to family members or other experience members of the community.

Illness could result from several causes, including sorcery, object intrusion, soul loss, and evil spirits. Sorcery was practiced by *bad* shamans, that is, those who used their special powers for harm. Such an individual might acquire possession of some object belonging to the proposed victim, and then by performing certain rites or incantations over it the shaman was able to cause pain or sickness in its owner (Osgood, 1936, p. 156). The idea of an object lodged in the sick person's body was also widespread among the Athapaskans. This might be a stone, arrowhead, piece of string, or even an invisible object, but whatever its nature it had to be removed before recovery could take place (VanStone, 1974, p. 67). Soul loss could only be remedied by finding the errant soul and restoring it to the body (McKenna, 1965, p. 79). Finally, the idea of an evil spirit taking possession of the sick was also a pervasive one here. An evil spirit, perhaps encouraged by a wicked shaman, might simply think about its victim and thus capture the individual (Carroll, 1972, p. 51).

Healers

Shamans were predominantly male but females were also known to assume the mantle (VanStone, 1974, p. 66). Sometimes a son followed in his father's footsteps but by no means always (McKenna, 1965, p. 78). Although some would-be shamans displayed their special talents by the age of six or seven (Osgood, 1936, p. 156), it was more usual to begin around the age of 15, when the individual began to have vivid dreams, in which he or she travelled extensively and became acquainted with certain animal spirits that became lifelong helpers. In later years such animal spirits would talk through the shaman during a performance. During these early months the neophyte often lost her or his appetite and became quite emaciated. Established shamans were then called in to evaluate the situation and find out where he or she had traveled in dreams. When the correct place was named, the young individual would jump several feet in the air, thus confirming the destiny to be a shaman (McKenna, 1965, p. 78). Other evidence of special powers was the ability to conjure, such as being able to pull a small spruce tree out of the ground and replace it while leaving no sign of disturbance (Osgood, 1936, p. 156). Once the novice had successfully demonstrated shamanistic powers, he or she was accepted as a colleague by the established shamanistic fraternity.

As the new shaman grew older, he or she gradually acquired other spirits besides the primary animal helper. Also through an active dream life he or she learned the special powers of natural objects that had medicinal properties.

These were collected and kept in a special medicine pouch. One such pouch of a Chandalar Kutchin shaman contained a small ermine skin, a bear claw, and some dirt resembling wet ashes, said to be the excrement of a large snake (McKenna, 1965, p. 79). Other special possessions of a shaman were his songs that were used in various ceremonies.

For the most part shamans wore no special dress, except that their clothing might be more elaborate, due to their personal wealth (Osgood, 1936, p. 156). One exception to this rule was the Tanaina shaman who wore a special parka ornamented with rattles made from claws and beaks. In serious cases the shaman might also wear a bear's head, bear paw mittens, and a bear skin belt (Osgood, 1937, p. 177). Other special paraphernalia of the shaman included a kind of tambourine drum, wooden rattles, masks, and the so-called *devil's stick*. This latter was a carved stick about shoulder high, with a representation of an animal on the head. It was used to drive out evil spirits by being struck on the ground. Another important item in some groups was the *devil doll*, which was supposedly made to enter the sick person's breast and then later extracted with the evil spirit (Osgood, 1937, pp. 178-179).

Magico-Religious Healing

The specific healing methods of the shaman depended to some extent on the cultural group. In general, however, the shaman danced, drummed, shook rattles, and sang special songs.

In a case where the shaman attributed the illness to the intrusion of a foreign object, it was his job to remove it by sucking, blowing, or pulling on the object, to the accompaniment of songs and incantations. Difficult cases involved magical surgery with a special wooden knife. This knife was supposedly thrust into the chest or abdomen, the viscera pulled out and inspected or washed, then returned with no external scar remaining (McKenna, 1965, p. 79; Osgood, 1936, pp. 156, 159).

When the spirit or soul was lost, the shaman sought to recover it by going on a spiritual journey. An example of how such a lost soul might be recovered has been described for the Chandalar Kutchin. The shaman stripped naked and crawled under a large blanket with the sick man. He got to his feet under the blanket and began to sing, and then fell in a faint. The shaman's spiritual helpers then went in search of the lost spirit, all the while describing the country they were traversing (McKenna, 1965, p. 79).

In the case of an evil spirit taking possession of a victim, the shaman went through an elaborate performance to exorcise it. An eyewitness account of such a performance by a Koyukon shaman has been told by Whympers (as cited in Sherwood, 1965, pp. 26-27). After pretending to draw the evil spirit from the victim, the shaman wrestled with it and finally threw it into the fire. Next he ran in mock terror from the fire with the spirit in hot pursuit. The latter then gained possession of the shaman, causing him to gesticulate wildly, groan, and even froth at the mouth. Throughout, a chorus of chants built to a climax and finally the original victim hobbled from the scene cured.

Probably the most detailed account of an Athapaskan shamanistic performance is that of Father Joseph Jette, the famous scholar of Indian languages (1907). The shaman was usually not asked openly to perform: rather, a suggestion was made covertly and indirectly. A relative visited the shaman, bringing along a suitable gift. After initial small talk, the relative finally got around to the patient's condition, which he described with lurid exaggeration. The shaman then either sent the relative back reassured, or in some cases thought it appropriate to undertake a full performance. According to Father Jette's account:

The patient is laid upon a bed, in a corner. The audience are squatting all around, along the walls of the cabin. The medicine-man is in the middle. They begin, the shaman leading, to hum a plaintive tune, the voices being gradually raised to a louder, but not very loud utterance. After a few minutes, the medicine-man, covering himself over the head and shoulders with a blanket, begins a sort of dance, keeping time with the tune....His motions, slow at first, gradually becomes quicker until he works himself to a regular mad dance. Perspiration runs freely over his whole body, his face, distorted by effort, assumes a hideous appearance, saliva drops from his mouth, and his voice, tired by the continuous yelling, becomes hoarse....The patient has to be very sick indeed if he does not feel the influence, and if his imagination and credulity are not roused to the utmost. This may go on for one, two, or even three hours. Finally, when the shaman thinks that enough has been done in the way of incantations, he makes more and more frequent stops at the bed-side, pretending to make great efforts at extracting something from the patient's body. Once, twice, three times, perhaps, he fails in his attempt. The sick man groans with pain under the squeezing hand. The medicine-man exhorts his assistants to further efforts; the music of the chorus redoubles its plaintive accents, and eventually the spirit has to yield. (pp. 196-171)

Empirico-Rational Healing

The Athapaskans depended on their shamans for the treatment of most illnesses. Dall (1870, p. 195) reported that they had virtually no plant remedies; others, however, report a number of simple ones that were sometimes applied by the shamans themselves and sometimes by family members or old women skilled in this area (Lantis, 1963, p. 12; Osgood, 1958, p. 229). Medicinal plants were used internally by chewing them or by taking them as boiled extracts, or infusions. Other plant substances were applied externally as poultices, or rubbed on as liniments. Some remedies were used internally or externally.

Colds were treated among the Upper Tanana by drinking a decoction prepared by boiling the buds of the cottonwood tree. An infusion made from caribou moss was also used as a cold remedy (McKenna, 1959, p. 109). The Kutchin ate the roots of the arctic dock for colds, or else inhaled the vapor from the boiling leaves of a certain small flowering plant growing on the mountain tops (McKenna, 1965, p. 71). For sore throat an Ingalik remedy was prepared by boiling down the inner bark of a spruce tree until the substance was like soap, and then taking it internally or applying it externally (Osgood, 1958, p. 230).

For stronger aches they drank a medicine made by boiling the outside bark of the cottonwood tree or by boiling red bunchberries. The leaves of wild rhubarb cooked with fish eggs made a useful remedy for constipation (Osgood, 1958, p. 230). The root of coltsfoot (*Petasites palmate*) was chewed by the Tanaina to treat blood in the sputum. Likewise, it was boiled to make a tea which “made the blood soft” (Osgood, 1937, p. 116). Juniper berries, raw or cooked, or a decoction made from juniper sprigs, were used by other groups for internal pains and later as a remedy for consumption (McKenna, 1959, p. 109; 1965, p. 71).

For the treatment of cuts and open wounds the Kutchin applied a highly astringent poultice made by boiling the macerated leaves of the anemone (McKenna, 1965, p. 71). Other groups used sage (*Artemisia tilesii*) to wrap around the injured part (Osgood, 1937, p. 116), or applied fresh spruce pitch, which at least tended to keep out the dirt (McKenna, 1959, p. 109). Burns were also treated with spruce gum that had been softened by warming (Osgood, 1958, p. 229). For rheumatism, the Tanaina used leaves of the western nettle (*Urtica lvalii*) to wrap the affected part, after first treating it with hot water (Osgood, 1937, p. 116). According to Schwatka (1891, p. 54) the giant nettle, probably devil's club, was used by shamans as a prophylactic against witchcraft. Among the Eyak Indians, ten days after a baby was born both the father and mother took a bath in water in which devil's club had been boiled (Birket-Smith & De Laguna, 1938, p. 160).

Some healing substances of animal origin were also used. The Upper Tanana rubbed bear gall, fresh wolverine liver, or the blood and scent glands of the weasel on a painful rheumatic joint. Ravens were sometimes killed and eaten to cure internal ailments, and the gastric juice of the porcupine was thought to have diuretic properties. For severe cuts, a piece of fresh meat was warmed and the juice squeezed into the wound (McKenna, 1959, p. 109). Other treatments using animal substances were known to the Ingalik. For example, for snow blindness the individual held his head over a pot of cooking fish eggs. A common treatment for toothache was to chew on the heated inner edge of a grayling's dorsal fin. Or for earache, the outer portion of a ground squirrel's tail was burned and the smoke allowed to enter the ear (Osgood, 1958, p. 230).

A few mineral substances were also used therapeutically. The Ingalik considered crushed charcoal an excellent remedy for stomachache, as were ashes stirred in water and swallowed. They also applied red ocher as a treatment for severe burns (Osgood, 1958, pp. 229-230). The people of the Upper Tanana used a salty exudate from certain rocks mixed with water for colds or headaches. Ashes were applied to the mouth to stop bleeding (McKenna, 1959, p. 109).

Heat and cold were useful adjuncts for certain kinds of illness or injury. The sweat bath, for example, was helpful for rheumatic pains and stiffness (McKenna, 1959, p. 109), and others considered heat helpful in snow blindness (Osgood, 1958, p. 230). The Kutchin used sweating for a variety of illnesses. They had the patient lie naked, except for a blanket, on a bed of moss spread over heated rocks. After sweating freely, the individual arose, dried himself off and dressed again (McKenna, 1965, p. 71). Cold was also used in various ways as a treatment. The Ingalik sometimes treated headache by plunging the head into the snow or by pouring cold water over the head.

Fever was treated much the same way. A frostbitten area was rubbed with snow to encourage circulation (Osgood, 1958, p. 229-230).

According to Dall (1870, p. 195), the Indians of the middle Yukon used bleeding, scarification, cautery, and ligatures as surgical methods. Apparently such procedures were performed by skilled individuals from the community rather than by shamans.

Bloodletting was carried out for several types of aches and pains, an incision being made directly over the affected part. A backache, for example, was treated by an incision over the kidneys, while headache was relieved by an incision on the top of the head, or by causing the nose to bleed. The usual lancet consisted of a small triangular point set in the end of a short wooden handle (McKenna, 1959, p. 108). A special sort of bleeding was used for snow blindness, which was a common problem in the spring each year. A small incision was made either over the eye or at the outer corner of the eye. This procedure was often performed by women, who were said to be more accustomed to delicate work with their hands. The usual instrument was a beaver tooth, a bone needle, or a bunch of stiff hair doubled over (Osgood, 1958, p. 230).

For toothache the offending tooth was sometimes pulled out using a piece of tough sinew. In other cases incisions were made in the gums around the painful tooth to draw off excess blood (Osgood, 1937, p. 116). The Ingalik sometimes plugged a dental cavity with a piece of bone and then broke it off flush. Occasionally this process led to a shattering of the tooth itself, which then could be more easily extracted (Osgood, 1958, p. 230).

Some groups treated fractures by restoring the original contour of the limb as best they could and then enclosing it in a heavy cylinder made from pieces of birch bark stitched together. When the healing had progressed sufficiently, the bark was removed and a binding of pitch and skin applied. When itching occurred under the pitch, healing was judged to be complete (Carroll, 1972, p. 50; Osgood, 1958, p. 229). A fractured rib was treated by placing a rabbit skin over the painful area and covering it with a flat piece of wood held in place by a broad belt of tanned skin (Osgood, 1958, p. 229).

Boils were sometimes treated by lancing them with a bone needle. Another method involved applying a small piece of moistened rabbit skin over the abscess, so that the heat from the skin would lead to spontaneous rupture. Once the boil began to drain, another piece of rabbit skin was applied to absorb the pus (Osgood, 1958, p. 229). One final therapeutic procedure related to surgery was tattooing. Certain types of heart trouble, for example, were treated by having a heart-shaped design tattooed on the chest by a woman skilled in the art (Osgood, 1958, p. 230). A person with *bad legs* might have a circle tattooed around the ankle to bring strength to the legs. Sometimes tattoo ink was spread on the face of one who had suffered a paralytic stroke (Carroll, 1972, p. 50).

CHAPTER 7. CONCLUSIONS

Traditional Medicine, Old and New

What is the value today of traditional ideas of health and healing? Is it worth the effort to study, when virtually none of its content seems relevant in a world of high-technology medicine? Are these quaint traditions merely an exercise in antiquarianism? These questions may be answered in at least two ways.

First of all, the study of this aspect of cultural history is of great significance to the peoples who trace their origins to the cultures in question. The intense pressure for change inflicted by Western culture, as occurred in eighteenth and nineteenth century Alaska, to a certain extent caused in the Natives a loss of confidence, pride, and identity. Nowhere was this loss more evident than in medicine. Since most healing was closely bound up with religion, it could not be openly practiced, at least within the sight of the Europeans or Euro-Americans. One of the major priorities of missionaries, in fact, was to destroy shamanism as rapidly and completely as possible.

What hastened this process even more was that in the nineteenth century, at least, some aspects of Western medicine, although by no means all, were clearly more effective than the methods available to the Natives. Smallpox vaccination was the most obvious example, but there were others, such as anesthesia, certain drugs, and some types of surgery. As a result many Natives forsook their own healers and flocked first to the Russian physicians and feldshers (i.e. a kind of physician's assistant widely used in Russian America) and later to the American medical missionaries or government doctors.

A second reason for studying traditional methods of healing today is that they are undergoing a revival, not only in Alaska but throughout the world. People are everywhere taking another look at folk medicine for its own sake, not simply because of its intellectual interest. This trend has developed in part because of dissatisfaction with modern *scientific* medicine. Unfortunately, however, this trend has its own inherent dangers, such as the emergence of quacks and other unethical practitioners, who play for profit upon the public's fears and credulity.

The medical profession today would do well to take a closer look at some of the features of traditional medicine. For example, the relationship between a traditional healer and her or his patient was usually based on confidence and respect, although admittedly fear was sometimes an additional factor. The healer knew the patient personally, spoke the same language, and shared the culture. The healer was available when needed and competent to treat most ordinary illnesses, which are in any event self-limited. Doctors of today have little more, and perhaps less, to offer for the common cold, influenza, sprains, contusions, and minor mental indispositions than their colleagues of two hundred years ago. The patient usually went away happy from the encounter and at least felt better. Preventive medicine was also practiced, in the sense that many customs relating to health were based on the firm belief that sickness could be avoided by the observance of taboos. Some of these probably had real value and others at least kept the patient's mind focused on health and reminded him of his own responsibility for keeping well.

Finally, as we shall see, some traditional remedies and surgical procedures had real therapeutic value, if only for the relief of symptoms. It is well known that many of the drugs most widely used in modern medical practice have been derived from plants. Among the many examples that could be cited are atropine, coichicine, caffeine, cocaine, ephedrine, and curare (Farnsworth, Akerele, Bengel, Soejarto & Guo, 1985, pp. 965-981).

All of these factors have led the World Health Organization in recent years to encourage the use of traditional healers in Third World countries where modern Western medicine is not readily available. These practitioners can care for many common illnesses quite effectively, to the full satisfaction of the patient.

A similar situation prevails in Alaska today, although without official encouragement. In remote areas villagers either treat themselves in traditional ways or else visit a local practitioner for their care. Shamanistic healing as such probably no longer exists in Alaska, although undoubtedly traces of it remain in the form of taboos and amulets. Empirical healing, however, is alive and well.

In Alaska it is now no longer socially unacceptable for a Native to discuss traditional medicine with a Caucasian. During four years of medical practice in "bush" Alaska in the middle 1960s, I heard of only one Eskimo practitioner still active in a remote village. Today hardly a week goes by without a patient talking about having visited a *Native doctor* before consulting me. I believe that just as many practitioners were available over 20 years ago as now, but traditional medicine was not a subject to be talked about freely, for fear of ridicule, or at least well-meant admonishment.

In discussing Alaskan traditional medicine of an earlier time, it should be pointed out that the healing methods prevalent in Europe and America during the eighteenth and early nineteenth centuries were not markedly different from those we have discussed in this book. In Europe bleeding, either by lancing a vein or by the application of leeches, was a mainstay of treatment for centuries. Emetics and purgatives rid the intestinal tract of noxious humors from both ends. What few effective drugs that existed, such as digitalis, quinine, and morphine, were all derived from plants, and many other plant and animal remedies of more questionable efficacy were also widely used. Surgery, until the development of anesthesia in the 1840s, included little more than wound treatment, cutting for stone, cataract extraction, and amputation, all of which had their counterparts in Alaska.

An interesting parallel also exists between the role of healers in traditional Alaskan society and the various types of practitioners in eighteenth- and early nineteenth-century Europe and America. In Alaska, as we have seen, the shamans handled major life-threatening diseases and mysterious internal ailments, whereas other community practitioners dealt with minor illnesses and injuries. The shamans commanded much respect and even dread for their powers, their training, and their wealth. Other practitioners were ordinary people who might be family members, relatives, or friends. They were skillful in their own way but not held in unusual esteem.

In Europe, the healing arts were divided in much the same way. The physician, who had an M.D. degree, was university-trained in botany, materia medica, anatomy, obstetrics, physiology, and pathology, as well as in philosophy, Latin, and Greek, this last so that he could read the old medical classics such as Hippocrates, and Galen. He wrote his thesis in Latin, not to mention many of his other writings, such as letters to colleagues. The physician was held in respect by the community because of his power, wealth, and arcane knowledge beyond the grasp of the ordinary mortal. The other practitioners in the community, such as apothecaries and barber-surgeons, were members of a common guild, well below the physician in social standing. These individuals were not university-trained, but rather learned their arts as apprentices to an established practitioner. They handled most of what we would today call primary care. Serious ailments were referred to a physician if the latter's services could be afforded.

The Effectiveness and Safety of Alaskan Traditional Medicine

Were traditional healing and traditional health practices effective, or could they have been hazardous? The answer to both of these questions must be a qualified "yes."

The many health practices of the Alaska Natives relating to pregnancy, childbirth, child care, menstrual functions, and aging often seem pointless and even harmful. What possible use, for example, was the seclusion of a teenage girl for months at a time simply because her menses began? The same question might legitimately be asked of many so-called *health* practices of our own time, such as megavitamin doses or tanning parlors.

The previous chapters demonstrate that each of the Alaska Native cultures had similar practices for pregnancy and childbirth, for example, although it is doubtful that the northern Eskimos could have been directly influenced by, say, the Tlingit Indians. An examination of other pre-literate societies around the world, moreover, would demonstrate that comparable practices have also developed elsewhere. Much the same could be said for child care, rites of passage, body ornamentation, old age, and dying. Nor are such customs limited to traditional societies. Present-day lay midwives, for example, use very similar techniques to those of the Koniags, Eskimos, or Aleuts of the eighteenth century. Many of these practices are rational and even helpful to the parturient woman, based as they are on the experience not only of the individual, but of the generations that preceded.

Menstrual customs have a long cultural history, as demonstrated in the fifteenth chapter of Leviticus in the Bible. The idea of *uncleanness* during menses is nearly universal in human societies, including our own, where a large industry is based on the concept of *feminine hygiene*. The first menstrual period was always given special attention, since it marked for girls the critical transition to maturity and full womanhood, including marriage and childbearing. The long seclusion and ceremonial practices centered around this event simply demonstrate how important it was for the individual and for the family. A Jewish bar-mitzvah might be a modern male counterpart.

Most other traditional health-related practices have similar overtones reflecting either the importance of a life-transition or else a means to cope with it by the ritualization of behavior into accepted norms.

Taboos are also universal in human society, although they take somewhat different forms in different cultures. In a world believed to be inhabited by countless spirits, either good or evil, behavior had to follow strictly defined patterns to prevent conflict with the natural order. Stepping out of line risked the danger of displeasing the gods and thus bringing down misfortune, including sickness or injury. Not walking under ladders, avoiding black cats, knocking on wood, and not stepping on pavement lines are modern examples of taboos in our own society. Sports are particularly rich in taboos, for example the belief that a no-hitter in baseball will be spoiled if the sportscaster mentions that a pitcher has not yet allowed a hit.

Taboos are often difficult to understand without an intimate knowledge of particular culture, and even then the reason for them is not always clear. Some beliefs had an obvious symbolic meaning, such as untying knots to facilitate delivery, or not walking backwards out of a hut for fear of a breech delivery. Other examples are not so easy to explain by any rational means. There seems to be little doubt that shamanism was effective in dealing with many illnesses; were it not so, shamanism or its variants in other cultures would not have arisen nearly everywhere in what is a remarkable example of cultural convergence. In Alaska each of the major cultural groups had shamans, all of whom had significant similarities in their selection, training, social standing, and methods of treatment. If shamans were not an effective way of dealing with serious illness, the institution would hardly have survived.

To be healed by a shaman was an intense emotional experience. The shaman was above all one to hold in awe for her or his supernatural powers. The shaman had masks, amulets, rattles, drums, and other tools of the trade, each of which was thought to possess special properties in communing with the world of spirits. The shaman usually dressed differently from other people. The chants, dances, and sleight-of-hand had a hypnotic quality about them, an effect enhanced by the semi-darkness. Not only the patient but also friends and family were caught up in the spirit of the session. Most of all, however, the patient *believed* in the power of the shaman to heal. The sick person was confident that the healer could in truth communicate with the spirits for help in finding a lost soul, or in revealing a broken taboo, or in removing a *poisonous* object. Given the physical and psychological milieu of a shamanistic séance, it is little wonder that healing took place in many cases.

In our own day faith healing operates on much the same principles. A session is usually held before a large *live* audience, or in a sacred place with many historical overtones, such as Lourdes in our own day, or a temple of Aesculapius in ancient times. Most of all, the patient has confidence---call it faith---in the power of the healer to seek and obtain spiritual favor.

There can be little doubt that the same axiom applies on a more individual level. Every physician has had the experience that a patient with a significant disease seems to worsen and even die because he does not have the will to get better. On the other hand, patients with a positive and enthusiastic attitude toward recovery can often belie the pessimistic prognosis that physicians are sometimes foolish enough to inflict on them. The sick person,

we tend to forget, nearly always wants to get well. The individual's set of mind is often a greatly underestimated and underutilized resource for recovery.

The empirico-rational methods of treatment were likewise often effective. We cannot discount the possibility that natural plant and animal substances contained active ingredients with a favorable physiological effect on a disease, or at least its symptoms. Most traditional remedies evolved over a period of centuries, probably on the basis of trial and error. Those that were ineffective must have been discarded at an early date in favor of those that seemed to work. Nearly all traditional herbalists in Alaska were described as old persons, a fact which in itself suggests long experience in their art.

It is nearly impossible today to know whether most Alaskan folk remedies had a scientific basis, but quite beyond the physiological was of course the so-called *placebo effect*. This might in the present context be called the *shamanistic* aspect of drugs, that is, the positive effect of remedies not due to any inherent chemical effects, but rather due to the patient's belief that the remedy would help. In our own time, scientists have come to recognize the critical nature of this phenomenon. All valid testing of new drugs and vaccines in this country use the so-called *double-blind* technique, in which neither the patient nor the researcher knows until all the data are analyzed whether the substance being tested contained active ingredients or an inert substance. Not uncommonly the latter, known as a placebo, will show a positive effect in a quarter to a half of patients treated, presumably because the patient *wanted* it to work.

Could these empirical remedies have caused harm? It is unlikely that such internal and external substances would be in themselves harmful, sanctioned as they were by centuries of use. In our own day physicians worry about the use of folk remedies, but mainly because of the danger that such methods of treatment might delay more *appropriate* therapy, such as modern drugs or surgery.

Traditional surgery was in a somewhat different category. Here it is likely that some procedures were distinctly therapeutic and others could have been harmful. Both kind alike must at least have been painful.

Examples of useful surgical methods would include the suturing of wounds, the setting and splinting of fractures, the drainage of abscesses, and perhaps such rarely performed operations as cutting for urethral stone. Likewise, some obstetrical manipulations were probably helpful in hastening delivery in a difficult labor.

Balanced against these procedures were several that may have been helpful to a limited degree, but could also have been damaging. For example, the widespread practice of bleeding, which was common also in Western medical tradition, may sometimes have relieved a severe headache or even congestive heart failure. The same procedure could have caused a major hemorrhage, if a large vein or an artery were inadvertently cut, especially in an individual with a blood-clotting defect. Likewise, the practice of piercing, or *poking*, involved the relatively blind insertion of lancets or needles into the throat, joints, scalp, and other parts of the body to let out bad air or other

noxious humors. Such penetrations of the skin could easily have damaged a nerve, a large blood vessel, or other vital internal structures. At the very least piercing of the skin by an unsterile instrument must have frequently resulted in an abscess or other skin infection.

The physical methods of treatment used by the Alaska Natives were by and large rational and probably helpful. The application of cold over acute injuries or hot, inflamed areas made sense, as did the use of heat for cold injury or for arthritis. A couple of exceptions might be mentioned, for example the widespread practice of treating a fever by rolling in the snow, or the treatment of frostbite by rubbing snow and ice on the affected part. This latter method, incidentally, was frequently used in Western medicine until only a few decades ago. The use of warm mineral springs for arthritis or for certain skin diseases was eminently reasonable, the same practice having been used successfully for centuries in Europe and elsewhere.

In summary, it should be apparent that many methods of traditional medicine among the Alaska Natives were reasonable and probably effective. Were it not for a few great discoveries such as smallpox vaccination and anesthesia, Western medicine had little more to offer until the scientific revolution in medicine in the late nineteenth century.

The future of Alaskan traditional medicine is probably secure. With the renewed pride the Alaska Natives are showing in their own cultural heritage, there will be continued research and exploration in this area, much of it not by professional anthropologists but rather by the Natives themselves. They now have easy access to the best of modern technology, yet many find that all too little attention is being given to the relationship between the healer and the patient, and to the enhancement and mobilization of the patient's own resources for healing.

Traditional medicine in Alaska will also continue to exist because of the special geography of the state. Although each major Native village has a so-called Community Health Aide, a local person who serves as an extension of the Western medical system, many persons will prefer their own heritage of healing, at least initially, because of its simplicity, its ready availability, and their confidence in it.

The attitude of the medical profession in Alaska should not be hostile toward traditional practitioners, but rather tolerant, and accepting of their special skills. Ideally, physicians and traditional healers should view each other as colleagues, each with respect for the skills of the other. The healer should feel comfortable in referring a case beyond his or her competence to the established medical system. Likewise a physician should recognize that he or she might have something to learn from the healer.

Traditional medicine in Alaska or elsewhere is not inherently right or wrong, but a fact of life. It has its strengths and weaknesses, just as Western medicine does. The important point is that the wisdom of generations has molded the healing traditions of a culture, and humanity can ignore such wisdom only at its peril.

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Comments on Manuscript by Robert Fortuine on “Alaska Native Traditional Healing”

This book presents another valuable contribution by Robert Fortuine to the documentation of historic health care practices in Alaska. The topic and the time period covered expands the time horizon dealt with in Dr. Fortuine’s previously published works by addressing traditional Alaska Native health care practices during the 18th and 19th centuries – largely before extensive contact with European cultures and medical practice.

Dr. Fortuine addresses his topic in a broad context, dealing as much with the broader social and anthropologic context of the societies he describes as with specific health related practices. To the western mind most of the health care practices described in this book will appear non-scientific and often without readily apparent logical foundation. It is also apparent that the belief of both recipients and providers of the health care services and practices described was just as real as the belief of recipients and providers of health care services in 21st century United States. This belief and confidence clearly was a factor in often successful results.

Some of the traditional practices related to physiologic body functions, such as the time of initial menses for young girls, and to addressing perceived disease states will strike the reader as illogical, unenlightened, and/or cruel. The reader is cautioned to remember that in a similar time frame the more “enlightened” western culture was engaging in practices such as the Salem witchcraft trials and subsequent punishments. In more modern times what was considered enlightened state of the art western scientific medical practice included practices such as pre-frontal lobotomies which were used to address mental illness from the 1890’s well into the 1960’s. Forty thousand Americans were subject to this cruel and unusual, but well intended therapy.

The reader will have a strengthened impression of the hardiness of the Alaska Native people in dealing with a challenging environment in the absence of so many of the conveniences and luxuries that those of us who are newer to the arctic have brought with us. While Dr. Fortuine describes the life span for some of the groups as being shorter than today’s – and we know that the average life expectancy for all of the groups was much less than today’s – for other groups he describes it as not being rare for some individuals to live to what even today would be considered old age. This longevity attests to both the hardiness of the individuals and societies and hints that at least certain of the health related practices must have been helpful in mitigating the challenges of disease, injury, and environment.

This book is a newly published treasure from Robert Fortuine’s scholarship and knowledge related to health and health care in Alaska. The book is a tribute to his career long dedication to serving the health needs of the Alaska Native people.

Ward B. Hurlburt, M.D., MPH
Chief Medical Officer
Director, Alaska Division of Public Health
State of Alaska
Department of Health and Social Services

Well documented. Very interesting. Very informative. Educational

It’s good to know the different types of healing processes

(I didn’t like the Shaman Parts). I’d rather that they be left-out due to their nature and where they come from. When I read the shaman parts.....I wanted to destroy the whole paper and forget that I read it. Hopefully in the future “Shamnism will not be a part of any discussions or anyone to have to read about (It made me sick to my stomach.)

NANA REGIONAL CORPORATION / AQQALUK TRUST
INUUNAILIQTUT DIRECTOR
LELAND BARGER SR. Tribal Doctor

I recommend this book be provided to all the tribal groups here in Alaska and to anthropology and similar topic students. Quote from me on the book: “Fortuine has done a remarkable job of explaining both the diversity and the similarities across Alaskan tribal groups as they existed in the 18th and 19th centuries. Some of what he documents is painful to read because of the harsh realities of life in those days, but it is most informative and thought provoking reading. I highly recommend this book to anyone who wants to understand the history and traditions of Alaska tribal groups.”

Lyn Freeman, PhD, CEO
Mind Matters Research LLC
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A fascinating, if also at times horrifying, look at the traditional healing practices of the Alaska Native indigenous groups. Suffice to say, I'm glad I did not go through puberty during these times as an Alaska Native girl/woman. The trials that newborns and young children endured are also hard to picture in today's culture. I also found the length of life for the Aleut peoples amazing. The distinction between shamans as magico-healers and others in the community who would use plants, surgery, and other treatment options was informative. While much of this information does end up in a future work, Chills and Fever, this focus on traditional healing would be a welcome addition to the libraries of any person or organization interested in this topic.

Professor Kathy Murray
Head, Alaska Medical Library
University of Alaska Anchorage, Consortium Library
3211 Providence Dr.
Anchorage, AK 99508

This is a well done compendium, typical of Dr. Fortune's work.

Linda Green (16 March 2011 conversation)

Linda Green

Director, Center for Latin American Studies Associate Professor, School of Anthropology University of Arizona
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Intriguing introduction and overview of healing practices of Alaska's Aleuts, Athabaskans, Inupiat, Koniags, and Tlingits: plants, surgery, and shamans.

Victoria Hykes Steere
Associate Professor, Alaska Native Initiative
Liberal Studies Department
Alaska Pacific University

Though a practitioner of modern Western scientific medicine, Robert Fortune had a refreshingly open-minded attitude toward indigenous/traditional practices of medicine and healing. His sincere and broad-ranging interests in this direction are apparent in the diverse information compiled in this book. It fills an important gap in the literature and is sure to be a valuable resource for Alaska Natives and a wide spectrum of scholars concerned about health and healing, and Alaska Native history in general.

One of the book's most valuable attributes is that its author assembled facts and observations about traditional healing among Native populations throughout Alaska from an extensive array of historical sources. This was truly a labor of love: it required enormous time and dedication, as well as the ability and willingness to perform extremely tedious and detail-oriented research. That effort, together with the book's comparative format, increases the probability that what was perhaps Fortune's primary related objective will eventually be satisfied: i.e., that his book might be a launching pad for more comprehensive treatments of Alaska Native traditional healing.

-Notwithstanding its merits, it is unfortunate that the book has not been made current: i.e., the sources consulted and discussed between its covers all date to before 1990. This constitutes a significant shortcoming, one that should be clearly explained for the benefit of prospective readers. Toward this end, consideration should be given to appending a "timeframe" to the book's title or subtitle: e.g., "A Survey of Sources on Alaska Native Traditional Healing through 1986."

Ken Pratt, Alaska Native Claims Settlement Act Program Manager
Alaska Region's ANCSA Office
29 March 2011



Photo: Dr. Robert Fortuine at Big Lake, Alaska