Abstract:
The Apsaalooke people, or the Crow Indians, of Montana are faced with diminishing cultural practices, traditions, values, and language due to the influence of the dominant society. Modern technology has also contributed to the demise of a unique culture. This study is about the historical uses of natural resources by the Crow Indians, how they knew what was useful to their survival, and how that knowledge was transferred to the next generation. The purpose of this study was to learn what resources were historically used so the information could be preserved, to identify natural resources that are still being used so those natural resources could be protected, and to document information and knowledge so it would be available as a perpetual learning source.

Semi-structured interviews were conducted with 13 Apsaalooke elders in the Crow language. These interviews were then transcribed and translated. The standard approach to gaining access to informants and conducting interviews was not considered appropriate for research in this cultural context. This study was conducted recognizing and respecting the Apsaalooke culture's way of approaching tribal elders. A process of cultural acceptance, of participation of rituals and of learning acceptable behavior was instrumental in gaining entry into the Apsaalooke knowledge environment. To the Apsaalooke people, learning was as much a part of the natural process as was the birth of an animal or growth of a plant.

To revive the historical practice of using storytelling for transferring knowledge, the diminishing role of the Apsaalooke elders as focal information sources must be reversed. The role of the Apsaalooke elders as the gatekeepers of knowledge must be restored in order for the learning to be meaningful. The transfer of knowledge needs to be encouraged and maintained in homes, but also must be included in the Little Big Horn College curriculum. Little Big Horn College, a tribal college on the Crow Indian Reservation, can play an essential role in the preservation, protection, and perpetuation of learning about a way that has been uniquely Apsaalooke.
HISTORICAL USES OF NATURAL RESOURCES: 
TRANSFERENCE OF KNOWLEDGE 
IN THE CROW INDIAN ENVIRONMENT

by
David Edward Yarlott, Jr.

A proposal submitted in partial fulfillment of the requirements for the degree of 
Doctor of Education

Montana State University
Bozeman, Montana
May 1999
APPROVAL

of a thesis submitted by

David Edward Yarlott, Jr.

This thesis has been read by each member of the graduate committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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BIOGRAPHY

David E. Yarlott, Jr. (Anbalaxuux Xiassash or Outstanding Singer) was born and spent his first four years in Seoul, Korea. His heritage is from a Korean mother and a Crow Indian father. David is a member and also a child of the Greasy Mouth Clan. He was raised on the Crow Indian reservation in southeastern Montana. He is a fluent speaker of the Crow language. He enjoys participating in some of the tribal customs, ceremonies, and traditions.

David is a first-generation college graduate. He received his Bachelor of Science degree in Business Management with a Human Resource Option and a Master of Science Degree in Business Education with a Native American Studies support area from Montana State University-Bozeman. He has also been a student at Little Big Horn College, a tribally controlled community college in Crow Agency, Montana.

During the course of his graduate studies, he has been involved in working with Native American communities as a Natural Resources Curriculum Development Coordinator at LBHC and working with the Office of Tribal Service at MSU-Bozeman. In these capacities, there have been many opportunities to work with college universities, tribal colleges, community colleges, private and government agencies, and individual professionals across the United States and Canada. An internship was coordinated with the United States Forest Service in Bozeman, Montana, during his undergraduate studies. He has received several awards and recognition (such as the Harriet Cushman Award, Phyllis Berger Memorial, Grace Rosness Memorial, and Outstanding Native American Student) at MSU-Bozeman.

David has worked in the forestry field with the Crow Tribe, USFS, and Bureau of Indian Affairs, mostly in wildland fire suppression, for nineteen seasons. He has been a warden for Fish & Wildlife, and was raised in a farm and ranch environment. He has been involved with tribal colleges and the American Indian Higher Education Consortium since 1981. His involvement in youth activities include serving as a coach for sports, organizing activities, advising, presenting at workshops and seminars, and fundraising.

David has a deep interest in Indian higher education, history, culture, youth, economy, awareness, and a holistic approach to the natural environment.
ACKNOWLEDGEMENTS

This study is the result of the guidance, support, and encouragement of many people. I am grateful to all of the Apsaalooke elders whose invaluable contribution by way of their wisdom, information, and knowledge provided guidance throughout the course of this study. A special word of thanks to my clan parents from the Greasy Mouth Clan, who provided prayers and guidance in the Apsaalooke ways. Aho. My appreciation goes out to my doctoral committee chair, Dr. William Lieshoff and other committee members, Dr. Robert Fellenz, Dr. Wayne Stein, Dr. Sylvia Lieshoff, and Dr. Nate St. Pierre for their assistance and expert advice. Also, a note of appreciation to John Watts for his help and to Little Big Horn College for allowing me time to work on this study.

A special note of thanks to my parents, David Sr. and Jae Bok, whose care and encouragement provided the motivation to continue. Thanks also to my children, David, Jacklyn, Lawrence, and Mary, for their love and patience and other family and friends for their prayers and well wishes.

Finally, my gratitude to my wife, Deborah, for providing unwavering support, encouragement, understanding, patience and love throughout the course of the study.
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To revive the historical practice of using storytelling for transferring knowledge, the diminishing role of the Apsaalooke elders as focal information sources must be reversed. The role of the Apsaalooke elders as the gatekeepers of knowledge must be restored in order for the learning to be meaningful. The transfer of knowledge needs to be encouraged and maintained in homes, but also must be included in the Little Big Horn College curriculum. Little Big Horn College, a tribal college on the Crow Indian Reservation, can play an essential role in the preservation, protection, and perpetuation of learning about a way that has been uniquely Apsaalooke.
CHAPTER 1

INTRODUCTION

Apsaalooke

The Crow Indians of Montana call themselves Apsaalooke. The name Crow comes from an erroneous translation by French trappers of the phrase "the Children of the Large-Beaked Bird." The trappers called them the Gens du Corbeaux, People of the Crow, which was translated into English simply as Crow, and the name has stuck (McCleary, 1997, p. 1).

The coming of the Euro-American into Apsaalooke country was the beginning of a series of attempts at societal destruction of the Crow people's way of life by the agencies of the dominant Euro-American society. Genocide, freedom constraints by reservation boundaries, involuntary sterilization of women, children forced to attend non-Indian boarding schools, a ban on cultural events, and control of economic livelihoods by federal Indian agents were some of the dehumanizing schemes used in attempts to obliterate Indianness (culture, traditions, language, values, and beliefs) from the Apsaalooke. The customs, beliefs, culture, traditions, and values of the Apsaalooke people
were viewed by the dominant society as uncivilized. A society that was different from the accepted Euro-American norm was considered heathen, and therefore, the dominant society attempted to assimilate the Crow people.

The Crow withstood most of those attempts to de-Indianize them, but it was not without cost. Changes occurred in their lifestyle and their philosophy for survival. They altered certain aspects of their lives to adjust to the influx of Euro-American values, thought, society, and technology. Although Crows accepted the need for some changes, they preserved many of their cultural and traditional practices. The Crow, their culture, traditions, beliefs, and values have endured the encroachment of the Euro-American. Despite the pressures of cultural encroachment, many Crows believe they have held onto important aspects of Crow life. For example, language, clan systems, beliefs, cultural values, traditional practices, oral history, and a holistic view of the living environment still remain a major part of the Crow way of life (Deborah Yarlott, personal translated communication, 1995).

The Crow people have been able to adapt to the changes in their living environment and have survived the forces of a changing world. The Crows are a proud people; most of whom still live on the Crow Indian Reservation in southeast Montana. However, their dependence on nature has changed to
a dependence on government services. The economic well-being of the Crow historically depended on the availability of natural resources, and they are still a critical ingredient for the social and economic stability for the Crow. However, many of these resources are controlled by non-Indians.

**The Crow People**

Crow language is similar linguistically to the Hidatsa language and is categorized in the larger Siouan language family. Tribal members have made references to language similarities with the Kiowa and also with a band of Indians living in Canada (Buster Leider, personal translated communication, 1996). During a conversation with Frances Stewart (personal translated communication, 1998), a Crow Tribal elder, he mentioned that he was told by a friend of a group of Indians way up north in Canada who spoke a similar language to the Crow. Upon hearing this news, he made a trip to visit these people. He said that he was amazed by the similarities of the languages. When he spoke with them in Crow, they also replied in the same language. Mr. Stewart mentioned that there were variations to the language, but many of the words spoken had the same meaning.

It is ironic that the Crow Tribe, historically friendly to the Euro-American, has been the Plains tribe that has
successfully retained their traditional language which is still spoken by approximately 87% of the tribal members. Sharon Peregoy (personal communication, 1997), a member of the Crow Tribe and curriculum advisor at one of the reservation's public schools, conducted a survey in 1996 on language use in the homes. The survey found that the majority of people over 35 years of age still spoke the Crow language, but the percent dropped below 50% for those in kindergarten and Head Start (pre-school programs for the underprivileged). This percentage is higher than any other tribe in Montana (personal translated communication, 1997).

The Crows live on an Indian reservation in the southeastern part of Montana. The reservation is home to the majority of enrolled Crow tribal members, and its population reached 9,439 on November 9, 1996 (Bureau of Indian Affairs, 1996). Of these, 6,766 or about 72% of the Crows live on the reservation. Another 459 enrolled Crow Tribal members live in communities adjacent to the reservation. The remaining 2,214 Crows are dispersed across the United States and in some foreign countries. Of those who live on the reservation, 3,132 or about 46% are under the age of 18. There are 2,872 between the ages of 18 and 50, and only 762 or about 8% Crows are over the age of 50 (BIA, 1996).
The Crow Tribe is one of two tribes in Montana that did not accept the 1934 Indian Reorganization Act (IRA). The purpose of this act was to conserve and develop Indian lands and resources, to extend to Indians the right to form businesses and other organizations, to establish a credit system for Indians, to grant certain rights of home rule to Indians, to provide for vocational education for Indians, and for other purposes (Getches, Rosenfelt and Wilkinson, 1979). Most Crow people felt that the IRA established rules for the dominant society, not Crows. The Crows adopted their own constitution in 1948. They have a general council form of government. The tribal council consists of all Crow women, 18 years and older, and all Crow men, 21 years and older. They elect four officers for two-year terms (Weaver, 1990, p. 68). This tribal council structure makes the Crow government unique in the Western world. The council meets quarterly and at times when a special council is called for, with 100 members constituting a quorum (Robert Howe, personal translated communication, 1996).

Crow Reservation

The Crow Indian Reservation covers 2.28 million acres (BIA, 1998). The reservation is adjacent to the Montana-Wyoming border, the southern reservation line being the
Wyoming border. The city of Sheridan, Wyoming, lies approximately 20 miles south of the reservation boundary, and Billings, Montana, is just off the northwest corner of the reservation. The nearest off-reservation city is Hardin, adjacent to the immediate north central edge (Rand McNally State Map, 1996).

The reservation population, although widely dispersed, are mostly clustered in the valleys. The majority of the Crows reside in the Little Big Horn Valley. The Little Big Horn Valley has three towns along the Little Big Horn River. Wyola, the smallest, is the furthest south, located near the base of the Big Horn Mountains. Twelve miles north is the town of Lodge Grass, where the Little Big Horn River and Lodge Grass Creek intersect. The town of Crow Agency is in the heart of Crow Country. The Bureau of Indian Affairs, Indian Health Service, and Little Big Horn College are all located in this town. Rural homes are scattered throughout the Little Big Horn Valley, stretching from the base of the Big Horn Mountains to the city of Hardin (Howe, no date).

The Big Horn Valley has the second largest concentration of Crow people. Fort Smith, a small town, is located a few miles north of Yellowtail Dam. The next community is the town of Saint Xavier, which is even smaller. The majority of the area’s population are rural
residents scattered throughout the wide valley from Yellowtail Dam to Hardin (Howe, no date).

A third valley is located along Pryor Creek. Pryor is the only town that is established in this valley, and again most of the population is dispersed along the creek. There are other residents throughout the reservation in areas that are less populated. Soap Creek, Rotten Grass, Grey Blanket, Lodge Grass Creek, Owl Creek, Sioux Pass, Reno Creek, Sand Creek, Dry Head, Bear In The Middle, and Pryor Gap are some of the areas that also have Crow residents (Howe, no date).

The reservation lands range from lofty, pristine mountain ranges to lush, rolling foothills and semi-arid lands. Elevations range from 9,100 feet in the Big Horn Mountains to 2,900 feet at the confluence of the Little Big Horn and Big Horn Rivers. There are three mountain ranges on the reservation: the Wolf Mountains along the eastern boundary, the Big Horn Mountains along the southern boundary, and the Pryor Mountains in the southwestern corner (BIA, 1990).

Three main waterways run through the Crow Reservation. The Little Big Horn River originates in the Big Horn Mountains and meanders north through the Little Big Horn Valley. The Big Horn River begins in the state of Wyoming and enters the reservation through the Big Horn Canyon. The Big Horn River is interrupted by the Yellowtail Dam near
Fort Smith and then continues until it passes just east of Hardin. At this point, the Little Big Horn River and Big Horn River intersect to become the main body of the latter. In the western part of the reservation is Pryor Creek, which has a West Fork and an East Fork. The two forks join together a few miles northeast of the town of Pryor. The three main waterways running through the Crow Reservation are tributaries of the Yellowstone River (Rand McNally State Map, 1996).

Interstate 90 (I-90) is a major U.S. interstate that runs north and south through the Crow Reservation. I-90 has direct routes to the Midwest and the Pacific Northwest. Along the way, it passes through Sheridan, Wyoming, to the south and Billings, Montana, to the north. U.S. Highway 212 exits just south of Crow Agency near the Battle of the Little Big Horn Monument and extends eastward toward South Dakota and the Black Hills (Rand McNally State Map, 1996). These routes serve as the pathways to the different sites relevant to Crow cultural history.

Little Big Horn Battlefield, formerly named Custer's Battlefield, is an internationally known national park. This site where General George Armstrong Custer and the U.S. Th Cavalry were defeated by Sioux, Cheyenne, and Arapaho (Hoxie, 1996) in 1876 is a national tourist attraction. However, the Little Big Horn Battlefield near Crow Agency is
not the only tourist attraction on the Crow Reservation. Plenty Coups State Park and Museum and Yellowtail Dam are also major tourist attractions. The Big Horn Canyon Recreational Area and the Big Horn River offer recreationists a variety of water activities. These attractions complement other popular recreational areas adjacent to or near the Crow Reservation. The Big Horn National Forest is to the immediate south, the Custer National Forest has sections of forest to the west and east, and Yellowstone National Park is southwest of the reservation.

The Reservation Economy

The economy of the Crow Reservation is dependent mostly on service industries and agriculture. The service industries include government services such as those provided by the Bureau of Indian Affairs, Indian Health Service, Crow Tribal Administration, and the public school systems. Smaller service entities include gift shops, gas stations, grocery stores, and small restaurants (Dillon-Monroe, 1986). Agriculture, a combination of farming and ranching, is a huge business on the Crow Indian Reservation, but unfortunately its contribution to the reservation economy is small. These big operations are controlled by
non-Indians. While they provide some income and employment for some individual Crow members, it is mostly seasonal work. Most of the money earned from these operations goes off the reservation. Westmoreland Company, a coal mining company, strip mines tribal coal reserves on a ceded strip just off the reservation. Mining provides income through employment of some tribal members (Robert Howe, personal translated communication, 1996). However, like the benefits of agriculture, most of the proceeds from this economic activity go off the reservation.

These organizations and businesses are not enough to provide a stable economy. The average annual unemployment rate on the reservation has been more than 50% in the 1990's and has not dropped below 39% since 1976. The unemployment rate has risen as high as 75% in 1991 (BIA, 1995). In 1990, the U.S. Bureau of the Census indicated that 51% of the Crow Indian population on the reservation had an income below the current federally established poverty levels. Some tribal estimates of the poverty rate have been higher in many other years (Robert Howe, personal translated communication, 1994).

History

The Crow Indians have been an opportunistic people. They have learned to alter their patterns of living and to
mold their lifestyles to fit the environment. They migrated reacting to the pressures and circumstances of their environment. Bradley (1991) states that before they began their move in the 1400's and 1500's, the Crows were believed to have been living in the woodlands country of southcentral Canada. At some point they moved into the Devil's Lake area in North Dakota. Historians are unsure why they made this move. When the Crows moved into the Great Plains, their lifestyle changed from a people who subsisted on food from the lakes and the woodlands to a people who depended on gathering and hunting. The Crow people became followers and hunters of large game animals such as deer, antelope, and buffalo. This change made survival more difficult, and they had to constantly seek food (Bradley, 1991).

Sometime in the 1500's, the Crow Indians divided into two groups. The group that stayed in North Dakota was the Hidatsa. The group that moved further west called themselves Apsaalooke, the Children of the Large-Beaked Bird, and Biiluuke, Our Side. During the migration, another separation occurred with the migrating group dividing into two separate bands. The larger band came to be known as the Mountain Crow. The band that separated from them was called Beaver Dries Its Fur. This second group disappeared, with Crow oral history giving four possible explanations for
their disappearance. Lanny Real Bird (1996) mentioned four versions that he heard from his elders. His first explanation is that the Beaver Dries Its Fur band moved into Canada and remained there. Another explanation is that the group turned east and settled in the Lake Michigan area. The third explanation is that the group became part of the Kiowa, with whom they had close associations. The last explanation is that they were poisoned and killed off. This last explanation stems from stories from the Comanches telling of a group of people dressed like Crows found dead (Lanny Real Bird, personal communication, 1996).

There was another separation from the Mountain Crows. This group became a distinct band because of their habit of spending winters in the Wind River country. Because of an incident where a member of the band was kicked by a horse in the stomach, the band came to be known as Kicked in the Bellies (McCleary, 1997).

In later years, another group separated from the Hidatsa. They decided to join the Mountain Crows, the first group that separated from the Hidatsa, on the Plains. This second group was known to live along the river banks, and they came to be known as Those Who Live Amongst The River Banks. This name was later changed to be simply River Crows. Thus, the four bands that have been recognized by the Crows are the Mountain Crow, Beaver Dries Its Fur,
Kicked in the Bellies, and River Crow, and in each band there are a number of sub-bands (Crow tribal members, informal translated communications).

The migration of the Crows eventually led them to establish their homes on the Northern Plains. The advantages of living there were summed up by Rotten Belly, a Crow, in a statement to Robert Campbell of the Rocky Mountain Fur Company. This statement was reported by Captain Bonneville through Washington Irving.

Crow Country is a good country. The Great Spirit put it exactly in the right place. While you are in it, you fare well. Whenever you are out of it, whichever way you travel, you fare worse.

If you go to the south, you have to wander over great barren plains; the water is warm and bad, and you meet the fever and ague.

To the north it is cold; the winters are long and bitter, with no grass; you cannot keep horse there, but must travel with dogs. What is a country without horse? On the Columbia they are poor and dirty, paddle about in canoes, and eat fish. Their teeth are worn out; they are always taking fish-bones out of their mouths. Fish is poor food.

To the east, they dwell in villages; they live well; but they drink the muddy water of the Missouri, that is bad. A Crow's dog would not drink such water.

About the forks of the Missouri is a fine country; good water; good grass; plenty of buffalo. In summer, it is almost as good as Crow Country; but in winter it is cold; the grass is gone; and there is no salt weed for the horses.

Crow Country is exactly in the right place. It has snowy mountains and sunny plains, all kinds of climate and good things for every season. When the Summer heats scorch the prairies, you can draw up under the mountains, where the air is sweet and cool, the grasses fresh, and bright streams come
tumbling out of the snowbanks. There you can hunt elk, the deer and the antelope, when their skins are fit for dressing. There you will find plenty of white bear and mountain sheep.

In the Autumn, when your horses are fat and strong from the mountain pastures, you can go into the plains and hunt the buffalo, or trap beaver on the streams. And when Winter comes on, you can take shelter in the woody bottoms along the rivers. There you will find buffalo meat for yourselves, and cottonwood bark for you horses. Or you may winter in Wind River Valley, where there is salt weed in abundance.

Crow Country is exactly in the right place. Everything good is to be found there. There is no place like Crow Country. (cited in Belue, 1989, p. 10)

In the early 1800's, approximately 8,000 Crow people living in several bands roamed over 50 million acres, generally in the same region as their original 38.8 million acre Reservation (Bradley, 1991). After the establishment of the Crow Reservation in the Treaty of 1851, it took the Crows one generation to adapt to being reservation Indians. In 1870, the Crows were required to conduct reservation life. By the next generation, 1888, they had become homesteaders when they were confined to the reservation by the United States Government (Real Bird, 1997). By the third generation, they had become consumers of non-Indian goods and services and increasingly dependent on non-Indians for food, shelter, fuel, money, knowledge, health, and spirituality. This dependence has led to poverty, which in turn led to frustration and at times anger between the Crows and their non-Indian neighbors (Howe, no date).
A long history of friendship has existed between the Crow people and the United States government. This was unique among the tribes in the region. This uniqueness is due to the signing of a treaty in which the Crow voluntarily chose reservation life instead of being forced as prisoners of war onto reservations (Howe, no date). The Crow people saw this as an opportunity to choose their own place, instead of being forced to relocate to an undesirable environment.

In 1825, the Crow made their first treaty, called the Friendship Treaty, with the United States followed by the Fort Laramie Treaty of 1851 between themselves and other Plains tribes. During the discussions of the 1851 treaty, the Crow leader, Sits In The Middle Of The Land, described his people's homeland as being centered under the four base poles of a tepee with the southwest pole in the Wind River Range, the southeast pole in the Black Hills, the northeast pole at the confluence of the Missouri Rivers, and the northwest pole at the confluence of the Madison, Jefferson, and Gallatin Rivers or the Three Forks (Old Horn & McCleary, 1995).

Helene Smith and Lloyd Old Coyote (1993) described boundaries of Crow land after the 1851 treaty. This treaty established the southern boundary from the Wind River Range in Wyoming going east and passing south of Buffalo, Wyoming,
to south of Rapid City, South Dakota. From there, the eastern boundary stretched north to the Mandaree, North Dakota, area where the Little Missouri meets the larger Missouri River. The northern boundary extended westward following the Missouri River until it contours south and west along the Musselshell River to the Little Belt Mountains. From there the boundary dropped down to the Three Forks and then followed the Gallatin Mountain Range south to where it cut across Yellowstone National Park to the Wind River Range. However, the 1851 treaty established the original Crow Indian Reservation reducing Crow Country to 38,831,174 acres. The purpose of the treaty was to allow white settlers to move through Indian country without being attacked, and the Indian tribes were compensated by promises of annuities and trade goods (Smith & Old Coyote, 1993).

With the enactment of the Homestead Act in 1862 (Smith & Old Coyote, 1993), which allowed settlers to purchase 160 acres of Indian lands for $1.25 an acre, the pattern was set for additional reductions in the size of the Crow Reservation over the next 60 years. In 1868, the second Fort Laramie Treaty was signed which ceded 30 million acres of Crow country to the United States. Pressures from the encroaching Northern Pacific Railroad, white farmers and ranchers, and eventually the State of Montana intensified between 1882 and 1937. Congressional acts were passed which
included the land cessation agreements of 1882, 1891, and 1904, reducing Crow country to three million acres. In 1924 the Crow Tribe granted the State of Montana 54,000 acres of land in exchange for public school education of their children in all communities, and a final act of Congress in 1937 reduced the Crow reservation to its present size (Smith & Old Coyote, 1993).

Because of the Homestead Act of 1862 and all the land cessations which followed it, the Crow Indian reservation is now in a checkerboard land ownership situation. Crows and non-Indian landowners own sections of land bordered by each other. In most cases there are no large continuous tracts of land owned by any one individual (BIA, 1995).

**Natural Resources**

The Crow Reservation is blessed with an abundance of natural resources and is relatively undisturbed by development. There is an abundance of water resources with rivers, lakes, streams, creeks, ponds, swamp lands, and irrigation canals scattered throughout Crow land. An average annual precipitation of 17 inches supplements the water resources (Robert Howe, no date). The larger water resources have a variety of fish, mainly trout and catfish. Nationally, the most famous natural resource on the Crow
Reservation is the Big Horn River and its fishery of huge rainbow and brown trout.

Wildlife game species on the reservation include elk, mule deer, white tail deer, antelope, big horn sheep, grouse, pheasant, ducks, geese, and black bear. A buffalo herd, which is not currently considered as wild game, is under the management of the Crow Tribe.

There is limited commercial timber in the Pryor and the Wolf Mountains. The Crow Tribe treats the Big Horn Mountains as a roaded restricted wilderness area. Non-Crows need a permit from the Crow Tribal Administration and must be accompanied by a Crow Tribal member to enter the restricted area; the restricted area is also closed to any timber harvesting. However, there are a few cabins and buildings that are used by hunters and recreationists. The Wolf Mountains contain approximately 13,906 acres of ponderosa pine. The Pryor Mountains have an estimated 6,821 acres of lodge pole pine and another 1,399 acres of mixed ponderosa pine and Douglas Fir that have been identified as suitable for commercial development (BIA, 1988).

Fossil fuels and minerals are also present on the reservation. Bryan (1996) states that coal reserves have been estimated at 15 billion tons of feasible strip-minable coal. Oil and gas have an undetermined production potential, although in 1994 over 53,000 barrels of oil were
produced on the Crow Reservation. Other underground natural resources are the undetermined potential of uranium, bentonite, gypsum, limestone, dolomite, gravel pits, and a variety of other minerals (Bryan, 1996).

The land base is a major resource on the 2.28 million-acre Crow Indian Reservation. Bryan (1996) states that almost all of the Crow Tribe's land is classified as irrigated land, dry farmlands, or grazing land with most of it being leased to non-Indians. Leased areas include valley river bottom lands which contain rich dark soils for farming. The valleys have an estimated 30,000 acres of irrigated land, which is mostly used for cultivated farming with just a small portion of the irrigated land used for grazing. Dry farmlands are cultivated in areas that are accessible and can be cultivated without major equipment damage. An estimated 150,000 acres are used for cultivated dry farmlands. The largest portion, approximately 1.2 million acres, of dry farmlands is used for grazing purposes (Bryan, 1996). Of the 2.28 million acres on the reservation, the State of Montana owns 38,241 acres, and 710,583 acres are owned by non-Indians (BIA, 1994).
Economic development by Crow tribal members on the Crow Indian Reservation is virtually nonexistent. The present economic structure does not allow for many opportunities for economic development by Crow tribal members. In 1986, there were 25 businesses in operation on the reservation. These businesses included grocery stores, gas stations, gift shops, convenience/gas stores, motels, cafes, laundromats, and propane dealers (Dillon-Munroe, 1986). There are other individuals who sell arts and crafts on a smaller scale. Recent developments have been the establishment of three convenience/gas stores, a casino, and a gift shop/museum. The coal mining business has been fluctuating for several years but has not shown any significant growth in the past few years. There has not been any manufacturing or industry on the reservation for several years. There have been rumors of establishing a gasohol plant, of increasing mining, and of building a slaughter house (R. Howe, personal translated communication, 1995), but none of these have materialized as of yet. Overall, economic development on the Crow Reservation for Crow tribal members has stagnated and at times has regressed.

Economic development in land use has been the exception to this stagnation, but Crow tribal members have not
benefited much from this activity. Of the 2.28 million acres of land on the reservation, non-Indians own approximately 710,000 acres, and because of the leasing of Indian lands to non-Indians, approximately 95% of the total land base within the reservation is controlled by non-Indians (BIA, 1994). This process has been perpetuated in the agricultural field where non-Indians reap the benefits from Indian land, and individual Crows have little or nothing to show for it economically.

The future may be brighter for the Crow people with the U.S. Supreme Court’s decision on the Coal Severance Tax case which turned over tax monies of more than 28 million dollars to the Crow Tribe. The 107th Meridian case has also been negotiated and resolved, and as a result additional dollars and lands are forthcoming to the tribe.

Two other controversial events may also contribute to increased dollars to tribal accounts. One is known as Section Two, a law which stipulates that no individual non-Indian can own or control more than 1,920 acres of land (Beaumont, presentation, Little Big Horn College, MT, 1996), and the other is the taxing of non-Indian businesses in operation on the Crow Reservation. Section Two, if enforced, would reduce land holdings for many non-Indian land managers. The taxing of non-Indian businesses are being contested by some non-Indian business people while
others are paying under protest (Beaumont and R. Howe, presentation, Little Big Horn College, MT, 1996). The results from these legal and legislative events may or may not influence any economic developments for the Crow people on their own. The resulting future developments from these events will be reflected by what the tribal leaders decide. Decisions on how to utilize any benefits obtained from these transactions would aid efforts in improving economic development endeavors.

One major resource that can lay the foundation for economic development is education. Little Big Horn College (LBHC), established in 1978 under the Tribally Controlled Community Colleges Assistance Act, gained full accreditation from the Northwest Association of Schools and Colleges in 1990 (Little Big Horn College, Self-Study, 1994). LBHC can be a major player in this effort. With an enrollment of approximately 300 students (Little Big Horn College, Self-Study, 1994), LBHC has given Crow people optimism for the future, stemming from the hope that LBHC can bridge the gap between the Crow culture and mainstream society (Gwen Falls Down, personal translated communication, 1994). The Crows feel that LBHC is the vehicle that will finally carry them out of the low social-economic environment of the reservation through education.
Culture

Culture and tradition can be divided into different categories: societies, language, values, rituals, beliefs, and crafts. The Crow people have been fortunate to be able to retain and practice all six. Even though they can be placed in different categories, they all are key components to the Crow way of life.

The Crow people have historically been rich in culture and tradition and have a complex and intricate system of relationships. These relationships include kinship through blood, marriage, clan, phratry, and adoption (Old Horn & McCleary, 1995). They use a matrilineal system with clanships identified through the lineage of female members of the clan; however, the chieftains were men. The Crow child follows their mother’s blood lineage with this clan providing for the physical and emotional needs of the child. The father’s clan, called a sub-clan, promotes the status of the child through public announcements and also intercedes on behalf of the child in the spiritual realm with prayers and blessings.

The Crow clan system has endured the test of time. Through the years some of the clans have been integrated into other clans. The clans that are recognized today are
the Greasy Mouth, Sore Lips, Whistling Water, Bad War Deeds, Ties in a Bundle, Brings Home Game Without Shooting, Dung Eaters, Piegans, Big Lodge, and Newly Made Lodge. Clans that have been absorbed into other clans are the Wealthy Gophers into Whistling Waters, the Hair Remaining Lodge into Bad War Deeds, Crop Eared Domesticated Animals into Dung Eaters, and the Treacherous Lodge into Piegans (Old Horn & McCleary, 1995).

The clan system with sub-clans and kinships provides a variety of relationships such as avoidance, guidance, teasing clans, responsibilities, and respect. However, it is only one of the social structures in Crow Culture. Other social structures include ceremonial, military, governmental, entertainment and fraternal organizations (Old Horn & McCleary, 1995).

Historically, all Crows spoke their native language, but recent surveys indicate that the percentage of native speakers was down to an estimated 87% by the late 1980's (Boyer, 1991). In 1989, another survey was conducted in the grade schools on and near the reservation, and roughly 33% of Crow children under the age of 10 spoke the Crow language (Old Horn & McCleary, 1995). A more recent study involving Crow Head Start children showed that only approximately 25% of the Crow Head Start children spoke their native language (Sharon Peregoy, personal communication, 1996).
Language is not the only communication tool that the Crow use today. Body language, eye contact, physical contact, use of intermediaries, and sign languages are still important communication medium for the Crow people.

The value system that the Crow people maintain is in the caring, concern, respect, honor, and pride that they have for themselves and their environment. Many rituals are still conducted in the old ways, but some have been modernized. Many ceremonies, games, and events still promote and maintain these rituals. Crow beliefs maintain that there are higher powers than humans in this world that control all things in life. Crow people believe that the sacred circle is the symbol for all life. The Crows also maintain much of their culture and traditions through arts and crafts, such as the traditional outfits used in the different ceremonies (including dances, weddings, and celebrations), and the use of feathers, arrows, tepees, beadwork, and other objects that are authentically Crow.

Problem Statement

The encroachment of the Euro-American into Crow country has drastically altered the Crow Indian way of life. Although some of the Euro-Americans respected and honored the Crow way of life, other Euro-Americans saw an abundance
of land, water, game, and minerals that were not owned. This latter group brought a society of oppression, deceit, greed, and ownership. These characteristics contrasted with those of the Crows. Even though the Crow battled with rival tribes, within their own tribe they had a society that revolved around sharing, respect, and honor. The Euro-Americans that sought to claim these lands changed their tactics from physically destroying the Crow to other more subtle strategies. They disguised this ruse with words of civilization, progress, Christianization, assimilation, and education. This influence has affected the Crow lifestyle, culture, social structure, religion, learning, and the environment in which Crow people live. Although some of these changes were somewhat voluntary, it was with reluctance that the Crow leaders accepted them.

The total living environment was a learning context for the Crows; they learned from the atmosphere, fire, air, the water, mother earth, the plants, and the animals. What nature provided also controlled the economic environment of the Crow. Crows do not see land as an economic object to be personally possessed and exploited as the dominant society sees the land. Crows see land as another being, a living spirit, a giver of life, something very personal, and definitely not something for barter or trade. This is not to deny that Crows valued their land for its economic value.
because Crow country provided virtually everything needed for the sustenance of the Crow's subsistence economy (Belue, 1991).

The encroachment of Euro-American society disrupted the social relationship that was interwoven between the Crow, the animals, the plants, mother earth, the water, and the air. Subsequently to the encroachment, the Crow peoples' dependence on resources provided by nature has been slowly lost.

The Crow's method of teaching about the living environment revolved, in part, around the oral traditions. Stories were passed from generation to generation and this was Crow oral history. The Crow's traditional ways of learning through the stories, the traditions, the circle of life, and the socioeconomic way of life have been seriously impeded by the restrictions of living on a reservation dependent on government subsistence. The federal government's attempts to destroy the Crow people's way of learning through reservation confinement, the Euro-American's religion, boarding school education, the banning of ceremonies, and the control of their economic and social structure has seriously threatened this traditional way of learning.
Purpose Statement

The purpose of this study is to describe how natural resources have played an important role in the transmission of knowledge in the Crow way of life. The use of natural resources has always been crucial to the Crow way of life, and reservation life has restricted this use. A knowledge of the historical use of natural resources is necessary in order for the Crow people to take control of their destiny as Rowland (1994) has suggested and to maintain a way of life that the Crow people are accustomed to.

Research Questions

Information was sought from the Crow elders on the Crow tribe's historical relationship with the natural environment: how knowledge was obtained regarding the uses of natural resources and how that relationship has continued through time. The following research questions guided this study:

1. What are the Crow concepts related to natural resources (i.e., purposes, uses and stories)?
2. What influences determined which natural resources were termed valuable?
3. How was the knowledge of the different natural resources retained through the passage of time?
Adult: There is no clear definition of who or what constitutes a person as being an adult. According to W.D. Jordan, in Colonial America, adulthood was based on English common law, when a person reached the "age of discretion. For males at the time was fourteen and for females it was twelve years of age" (cited in Merriam and Brockett, 1997, p. 4). H.B. Long (1976) considered "the formal and informal learning activities of individuals above twelve to fourteen years of age as adult education" (cited in Merriam and Brockett, 1997, p. 5). Many cultures consider puberty to be the entry into adulthood. For the purposes of this study, an adult is an individual at any age who has been placed in a role of responsibility of key survival factors either by environmental circumstances, a natural process, or by spiritual intervention.

Apsaalooke: The name the Crow Indians use to identify themselves. Apsaalooke and Crow are both used in this study. At the beginning of the study, Crow was used extensively. The latter part of the study uses the term Apsaalooke. This is due to the nature of the study, where the elders preferred using Apsaalooke to Crow.
Band: A division of a nomadic tribe; a group of individuals who move and camp together. In this study bands are described like sub-tribes of a larger tribe. These bands could very well be considered separate tribes (Real Bird, 1997, p. 17).

Biiluuke: A term Apsaalooke use when referring to themselves, meaning, "on our side."

Ceded: An area of land that was originally part of the reservation, but no longer is, due to the land cessations by the government. The Crow Tribe retained the mineral rights below the surface, while the surface is owned by non-Crows.

Clan: A group of people that descend from a common ancestor. With the Crow people, the clan system is matrilineal; the blood lineage follows the female line.

Culture: The mannerisms and characteristics recognized of the Crow people. These characteristics come in the forms of society, communication, values, rituals, beliefs, crafts, and language. The Blackwell Encyclopedia of Social Psychology defines culture as: "The more or less systematically related act of constructions that people share as members of an enduring, communicatively interacting social group" (Mapstead and Hewstone, 1995).
Economics: The value placed on basic needs of living. The management of resources needed to survive in the environment.

Elder: An individual who is generally older and has experienced and lived in the traditional ways of the Apsaalooke. An elder is a leader, teacher, and mentor of the traditional practices, knowledge, and culture.

Fasting: A ritual of prayer and abstinence from food and water for up to four days. Individuals go off alone for solitude and separation from other people. Fasting sites are usually away from frequent travel areas and high atop a hill or mountain at a sacred site.

Head Start: A pre-school program for the disadvantaged.

Natural Resources: All sources of creation that follow a natural process of occurring. Sources such as air, water, fire, cosmos, plants, animals, mother earth, language, knowledge, culture, and people.

Reservation: A tract of land set apart for Indian people by the United States government through treaties, acts, and orders (Harrison, 1997, p. 11).

Sweat Lodge: A dome-shaped lodge constructed with willow trees and hides. The lodge is a place of ritual, ceremony, healing and prayer. Hot rocks are placed in a dug out pit within the lodge, and water is splashed on the rocks to create hot steam.
Vision: An extraordinary scene seen by an individual during a fast in a night dream or a supernatural day occurrence beyond normality.

Limitations

This study was limited to Apsaalooke elders living on the Crow Indian Reservation in southeastern Montana who have knowledge of historical uses of natural resources by the Crow people. This knowledge has been retained through many generations with the use of oral history. The study was also limited by Apsaalooke elders having difficulty in recollecting parts of stories. Another limitation of the study was in the accuracy of translation from the Apsaalooke language into English.
CHAPTER 2

NATURAL RESOURCES

Introduction

"The Earth, our Mother, is telling us to behave. All around, sign's of nature's limitations abound. ...Let us all work together to preserve and safeguard our world." (His Holiness The Dalai Lama, 1993, p. 30)

In the use of natural resources, many indigenous cultures utilized many different resources of nature for varying reasons or purposes. Some cultures utilized agricultural methods for their basic living needs, and others resorted to being hunters and gatherers. These processes have been learned by some people in the culture, and through succeeding generations, the knowledge of the processes has been retained and passed down.

The Crow people have learned to observe the environment and make use of what was available. They studied all creations; air, water, animals, plants, mother earth, fire, stars and humans. The Crow people then developed their survival skills from what they learned from their observations of the natural environment.
Literature of the Crow people's method of adult learning or the transference of knowledge is limited.

Variation in data collection methods, inconsistent criteria for inclusion of minority groups, and differing definitions of the term "adult" all contribute to the difficulty of collecting and analyzing reliable data. (Merriam and Cunningham, 1989, p. 584)

Jacobson (1996) describes how little is understood about learning, culture, and learning culture:

Considering how long adults have faced learning to function in new cultural contexts, it is surprising how little is understood about the processes associated with this sort of learning. (Merriam and Cunningham, 1989, p. 1)

Jacobson (1996) further writes; "In her review of cross-cultural adaptation, Anderson (1994) concludes that we understand only fragments of the process" (p. 1).

Examining the Context for Adult Education on Crow Culture

To have a better understanding of knowledge retention historically, research of our past is important. A.L. Wilson and K.E. Melichar (1994), in Merriam and Brockett's (1997), *The Profession and Practice of Adult Education* explain the importance of the perspectives of the past:

The purpose then is to examine the value of history as a way to critically reflect on who we have been and where we have come from in order to better understand the possibilities of what we can become. (p. 53)
J.B. Whipple (1964) suggests that two purposes for making history a part of the study of adult education. These aspects are that historical research has contributed to the knowledge base of adult education and that history can be used as a tool to improve practice (cited in Merriam and Brockett, 1997, p. 52).

Traditional practices of native cultures in the United States have many similarities, but have differed depending on the region and ecosystem the people have lived in. "A fundamental assumption on which the consensus paradigm rests is that societies cannot survive unless their members share at least some perceptions, attitudes, and values in common" (Merriam and Cunningham, 1989, p. 52). Indians who lived in the Northwest along waterways depended mainly on fishing for their main food source. People who lived in the Southwest mostly depended on agricultural produce they grew. The tribes that lived in the Great Lakes depended on both agricultural produce and fishing. Indians on the Northern Plains depended on large game for their main food source. Some of these resources were used for multiple purposes. Some cultures utilized varying natural resources to meet basic survival needs.

Though some research exists on educational, historical, anthropological, and sociological aspects of the Apsaalooke way of life, these studies do not showcase or do justice to
a historical way of life that existed before foreign influence encroached their living environment. Ross-Gordon (1991) recognized the lack of literature on minorities: “A recent review of the literature suggests that research on minority populations has not yet attracted the attention of the adult education research community” (p. 2). Though the literature is out dated, the review still holds true today. Conflict theorists maintain “that instead of regarding the education system as being fair and equal, serving society at large, they view education as an instrument for domination that perpetuates the inequalities of society—inequalities reflected in the selection and lack of mobility that occur” (Merriam and Cunningham, 1989, p. 55). Because of this educational inequality, “Racial minorities have often chosen or been forced to meet their learning needs outside the formal educational arena” (Ross-Gordon, 1991, p. 7).

In the Apsaalooke culture, there was no conflict in learning. Every able person, capable and willing to learn was given the opportunity for learning, beginning at a very young age (sometimes childhood) and continuing until they become incapable because of illnesses, old age, or death. The concept of lifelong learning is very evident in the Apsaalooke culture. According to Crow culture, reaching adulthood was not based on any predetermined age. Individuals are assessed according to the level of
responsibility, capability, ability, maturity, and knowledge they had. A person as young as eight years of age may possess all those qualities, because of deaths to family members, a gift of knowledge regarding a key survival ingredient, or a vision seen of a particular young person conducting "adult" duties during a fast by a member of the tribe.

Legal definitions of adulthood are generally anchored in chronological age, which varies within the same culture. In the United States, men and women can vote at age eighteen, drink at twenty-one, leave compulsory schooling at age sixteen, and in some states be tried in court as an adult at fourteen (Merriam and Brockett, 1997).

Documentation of historical uses of natural resources is rare, and any documentation of the transference of that knowledge by the Apsaalooke people is even rarer. The studies conducted are vague in content and does not display Apsaalooke worldviews. "Data regarding minority participation in formal institutions of adult education are scarce. Information must be gleaned from a variety of sources" (Merriam and Cunningham, 1989, p. 584). Any information gathered and documented in the past by non-Apsaalooke people displayed the perceptions of the dominant society. Ross-Gordon (1991) quotes Stanfield (1985), "We know little about the normal, routine lives of racial
minorities" (p. 411). The research that is conducted is often grounded in concepts developed by and about the white middle class (p.10).

Henry Old Coyote (1974) explains difficulties of translating Apsaalooke worldviews to a level of understanding in the dominant society.

How am I going to separate Indian beliefs and tell about one way over here and another way over there, like name giving, child birth and all that? Because everything is connected, and our belief enters into every aspect of our life. (Morey and Gilliam, 1974, p. 9)

Old Coyote (1974) later gives an example of how non-Indians may perceive an Apsaalooke traditional practice:

When the baby is on his way, the mother and father may call on a clan uncle or aunt to make wishes for the child. Sometimes they make wishes and direct them to the moon, whom they address as "Grandmother." Tell that to a non-Indian and it's nonsense, but the moon is used to keep track of the expectancy period—we speak of so many moons. (Morey and Gilliam, p. 17)

This literature review found that hardly any research has been conducted regarding Apsaalooke views on the retention of knowledge of historical uses of natural resources, which supplied various human needs for basic survival including clothing, nourishment, health care, shelter, tools, weapons, transportation, games, ceremonies, and rituals.
In reference to when adult learning begins in the Apsaalooke culture, Henry Old Coyote (1974) shared an experience:

In my case, until I reached puberty, my grandfather made me feel my age before he addressed me. Then after puberty, I was a man. That's when he opened the lines of communication. (Morey and Gilliam, 1974, p. 34)

The literature review netted little information about adult education, learning, or transference of knowledge, regarding historical uses of natural resources by the Crow Indians. "According to resistance theory, learners or teachers may passively or aggressively resist the perceived inequities of society as transmitted through school culture" (Merriam and Cunningham, 1989, p. 585). Literature found regarding Crow Indian history reflected uses of natural resources. The process of learning was not discussed in the literature. What were found were the uses of natural resources, which were part of the process of learning. These uses of natural resources documented in the literature have been the extent of this literature review.

Hunting

The Apsaalooke met their basic survival needs through hunting and gathering. The Apsaalooke was a typical hunting tribe depending primarily on the chase of large game, primarily the buffalo. They did not cultivate the ground at
all, except in connection with the planting for their Tobacco (*Ihchihchiae*) Ceremony. While not tillers of the soil, the Apsaalooke women, like those of other tribes, supplied a certain amount of vegetable food, digging roots with their digging sticks, gathering berries, and so forth (Lowie, 1975).

An individual method of stalking deer was evidently practiced by the Apsaalooke males. They covered themselves with a buckskin mask with horns to approach deer. With this disguise, the hunter would attempt to stalk close enough to the prey to make a kill. Stalking as a hunting technique was less productive than communal hunting in terms of game yield. Economically, the communal hunt was preferred. In communal hunting, large numbers of people from the tribe participated in the hunting and killing of game. The Apsaalooke practiced three methods of communal hunting: the surrounding, impounding, and the driving of large game.

The surround was dependent on the use of the horse. Horses could generally outrun the buffalo and approximately 200 or more participants formed a large circle surrounding the buffalo. On a prearranged signal, hunters converged toward the center of the circle, driving the buffalo. Once a sufficient number was concentrated in the constricted circle, killing began (Algier, 1993).
The horses helped increase the number of kills during a hunt. They gave the Apsaalooke a wider range of territory they could travel and reduced the time required to ensure adequate food supplies (Algier, 1993).

Impounding was a method of catching large game by utilizing sloping ridges leading down to a corral. On each side people were posted who stood and shook robes at the animals to frighten them in (Lowie, 1975). A fence was built across the open enclosure to create a holding pen where animals could be killed (Algier, 1993). This particular hunting method was used to kill deer, antelope, and buffalo.

The drive consisted of driving herds between two converging lines of men and women so that the animals would leap down a high cliff and be killed. This site and the activity became known as the buffalo jump. Where the bank was of moderate height, approximately eight feet, the buffalo were made to leap down into a corral in which a space was left open to permit the dragging forth of a buffalo for butchering (Lowie, 1975). In some stories/myths, several hundred elk were driven in the same way.

Another form of driving animals was with the use of fire. Fire hunting was used in the surrounding or driving of animals to a selected killing site. The hunters knew
that new grass sprouting after the fire would attract animals that grazed. The hunters could return to the same site when the new grass grew (Pyne, 1982).

Joe Medicine Crow discusses Crow techniques of handling buffalo based on legends of his people: "The two runners and their assistants would meet at the herd and start the animals moving." Whether leading or driving was used is not clear although driving is suggested. Medicine Crow stressed the use of medicine and incense as a means of holding the buffalo herd within certain boundaries until they were in position in the drive lane. This is not surprising since a good deal of ritual surrounds the buffalo drive according to all accounts (Frison, 1967).

Buffalo hunts were usually conducted in the fall. The buffalo were in better condition and the cool weather was better for processing meat (Frison, 1967). With the fall hunt, meat could be processed and stored for the upcoming winter months. Fall was the beginning of dispersement by the Apsaalooke, each band heading to their particular wintering grounds.

**Clothing**

For the Apsaalooke, clothing usually came in the form of animal hides or buckskin. The most common hide was from the buffalo, or bison. Elk, deer, and antelope hides were
also used, but for different purposes. The hide was transformed through a process, beginning with the skinning of the killed animal and resulting with a finished garment.

The usual mode of dressing the buffalo and other skins was by immersing them for a few days under a lye made from ashes and water until the hair could be removed. The hide was stretched on a frame or on the ground with stakes or pins driven through the edges. A skin dressing tool shaped like an adze, usually from a sharpened animal bone, was used to scrape the hair and excess flesh off the hide. Brains from the killed animal were rubbed into the hide. The hide was wrung by twisting the hide with a stick, while the hide was tied between two points. The hide was then rubbed with a rope to soften it and make it flexible (Lowie, 1983).

The side to be tanned was scraped with stones. Buffalo hides were not smoked, but those of the deer and elk might be. A pit would be dug in the ground, and wood was burned in this pit. A small lodge was erected with the hide over this pit so the smoke could not escape. When one side was smoked, the skin was turned inside out. Such skins were used for shirts, leggings, and moccasins (Lowie, 1983).

Warm buffalo robes were made with hides from females killed during autumn and early winter. Special hunts were conducted for these suitable specimens. The coats of the
female buffaloes were new, shiny, and thick, appropriate for that particular use (Algier, 1993).

**Nourishment**

Edwin H. Denig (as cited in Heidenreich, 1971) was amazed that the Crows appeared to have no law and little domestic regulation, yet lived together more peaceably than other tribes. There were no poor among them -- that is, no one went hungry. They took good care of their people (Heidenreich, 1971).

Historically, the Apsaalooke people followed a generalized yearly pattern. The force which most strongly influenced the gathering of Crow people was the availability of game and edible plants. Beginning in the spring, they would gather in larger and larger groups until the early fall buffalo hunt. This was possible because of the availability of roots, berries, and game in spring and summer. In the winter, after the fall buffalo hunt, the tribe would break into smaller groups because of the decrease in available game. The groups depended on stored food that had been processed during the summer, such as dried meat, roots, and berries (McCleary, 1997).

For the Crow, buffalo was the game animal of choice, constituting, in fact, a migratory natural resource which
provided the tribe with virtually all raw materials necessary to satisfy its material needs. Meat from cows was preferred and tongue, brains, and liver were routinely consumed raw. Cuts from the hump, which is right behind the neck and the beginning of the buffalo's back, were considered to be a particular delicacy. Since the buffalo was the main food source, the Crows ate meat from other game animals such as deer, antelope, and elk infrequently. The Apsaalooke never resorted to eating dogs, nor normally consumed fish or fowl (Algier, 1993).

Health Care

In the uses of medicines by the Apsaalooke, usually one person and one apprentice in a band had the skills, knowledge and the right to administer healing practices. These individuals were held in high regard by every tribal member.

Most of the medicinal products used by the Apsaalooke were derived from native plants. These plants were used to help cure or reduce illnesses, ailments and injuries. One of the common uses of plants was boiling them and drinking the beverage to treat a particular ailment or illness. Another use was to make a poultice out of the plant and apply it to an infected area to reduce swelling or draw out the poison. The burning of particular plants (incense) was
used to aid in speeding up recovering and was also used to ward off bad spirits.

Some ailments were treated with minerals from the earth. Certain types of minerals in the form of clays were used to doctor individuals.

Other types of medicinal practices had a spiritual connection. The Sweat Lodge was used to help cure certain ailments. In the use of the Sweat Lodge, prayers were offered and rituals were conducted to aid in the healing process. Medicine Bundles were used for protection from enemies and bad spirits. Medicine Bundles might contain any variety of small objects. Objects might be small stones or minerals seen in a dream; small animal parts such as feathers, claws, teeth; roots, stems, or leaves of a particular plant, and/or other objects seen in visions by the individual.

Shelter

In the constructing of shelters, skins were used to cover tepees. The Crow preferred hides without hair. Shedding of winter coats during late spring and early summer made hunting desirable during this time. It took approximately 12 to 20 skins to cover a tepee (Algier, 1993). Lowie (1983) gives an approximation of between eight
and 20 hides, with 14 skins being the average number required to cover a tepee (Lowie, 1983).

**Tools/Weapons**

Buffalo bull hides were too thick for use of clothing. They had other uses for these thick hides. They were used for the making of straps, saddles, bridles, and war shields. Younger bull hides were used to make parfleche bags (Algier, 1993). The horns of the buffalo were made into bowls, cups and spoons, the tail used as whips, and the bladders used as receptacles to hold liquids and buffalo droppings. Buffalo droppings or buffalo chips were used as firewood where wood was scarce. Small dishes, cups and spoons were also made from the horns of the mountain sheep (Lowie, 1983).

Arrow shafts were made from wood, and arrowheads were made from both sharpened animal bones and stones. Bows were made from wood, horn, or antlers. The wooden bows were usually made for the younger boys. The horn or antler bows were constructed from elk, mountain sheep, buffalo, and antelope prongs. They pieced the bow together by filing or rubbing down pieces till flat sides fit nicely together. They were then glued and wrapped with another piece in the center. Glue was made from boiled buffalo gristle and layers of sinew. The bowstring on a bow was made from sinew dried and processed from an animal. Knives were made of
chipped stone; mauls or war clubs were made of stone, and wooden handles were tied on with rawhide strips. War shields were made with the thick hide from a buffalo bull. White stones were used for sharpening knives (Lowie, 1983).

Other tools used were fleshers made from leg bones with a sharp object tied to the end with rawhide strips, adzes' made from antlers, beaming tools made from ribs of large animals, scraping tools made from animal shoulder blades, and sinew ropes. Scraping tools were also made from stones chipped to give a sharpened edge. Stakes and pins were made from wood or sticks (Lowie, 1983).

The findings of certain stone materials at buffalo killing sites indicated some of the different types of stones that were used. Frison (1967) writes that some projectile points were made from obsidian. The colors of these stones found were grey, red, brown, green and black. The good quality stones, black translucent and black opaque obsidian, were from the Yellowstone Park area. The poor quality stones, the red, brown, grey, green and some black came from a site in southeastern Montana. Some metamorphosed shale found at killing sites may have come from an area between the Big Horn Mountains and the Powder River. Quartzite found on the site may have come from the south end of the Big Horns. Other tools found at the site
were end scrapers, side scrapers, bifaces, retouched flakes, drills and bone awls (Frison, 1967).

Drills were made from heated prongs of an elk antler (Frison, 1967). Flint was used in the fire making process. Another source of fire making was the use of the fire drill. Pitted boards were made from cottonwood and driftwood from the rivers. Shafts were made from sticks from wild grapes or sagebrush. The tinder used to start fires was in the form of dried buffalo dung or rotten sagebrush (Frison, 1967).

The Apsaalooke made use of the plants to make some furniture. Backrests of willows strung with sinew were suspended from tripods and covered with buffalo skins (Lowie, 1975).

**Transportation**

Between 1400 and 1500, No Vitals, a Crow chief, received a vision that caused him to lead his people westward on foot, using pack dogs. Dogs had been the only beasts of burden available to the tribe before the horse. The utility of dogs was limited by their size and strength (Algier, 1993).

Transportation with the dogs was tough for the Apsaalooke. With the dog, the people that could not keep pace with the migrating bands were left behind. Those left
behind were mostly elders. With the horse, those that could not keep up were placed on the backs of horses (Algier, 1993).

The horse had been extinct in America for 10,000 years, but was reintroduced by Spaniards to the southwest Natives in the 1500's and 1600's. These horses were primarily of the Andalusian, Arabian, and Barb blood (Real Bird, 1997).

There are contradictory reports in the literature of when the Apsaalooke may have first obtained horses. Algier (1993) wrote, oral Apsaalooke tradition is unanimous in recounting an absence of horses and guns until sometime after the arrival of the tribe in Yellowstone Valley. Sometime after 1750, Robert Meldrum, a trapper and trader, recalled in 1862 that when he first went among the tribe in 1828, some older Crow claimed to have been alive when horses were introduced (Algier, 1993).

Other recollections of when the horse was obtained by the Apsaalooke, placed the acquisition of horse from natives near the Great Salt Lake between 1675 and 1735. According to Joe Medicine Crow, a Crow Tribal Historian, the Apsaalooke may have acquired their first horses as early as 1735 through trade relations (Frey, 1987). These first horses may have been obtained from the Nez Perce (Algier, 1993). George Frison (1967) writes that it was probably somewhere around the middle of the 18th century that the
horse began to play an important role in their cultural development if we accept Frison's (1967) citation of Haines (1938) date of 1730 as about the time the horse spread into that part of the Plains. Historical evidence of the Crow before and during transition to the horse period is therefore lacking (Frison, 1967).

With the horse, the Apsaalooke were able to broaden their range of raiding. This increased the possibilities of contacts with enemy warriors and thus increased the incidence of warfare. Due to the dangers of warfare, a good, fast horse was highly valued and guarded very closely (Frison, 1967).

Horses increased the efficiency of the chase, as well as the efficiency of transporting surplus cuts of meat for future consumption. Horses, stronger and larger, greatly increased the weight and size of articles which could be transported from one camp to another. The Apsaalooke could travel greater distances and shorten the time needed to move from one camp to another (Frison, 1967).

Horses were valued possessions; ownership of as many as 200 was not unusual for men of middle age. They became the most highly prized possessions for most of the Apsaalooke people. Having fewer than 20 horses indicated poverty status. In this sense the Apsaalooke people were considered the richest in horses (Frison, 1967).
Sometime in the 1600's, the Great Spirit appeared to Chief No Intestines (No Vitals) and gave him sacred ceremonial seeds. These seeds were the Sacred Tobacco Seeds. No Intestines received a vision to seek the seeds of Sacred Tobacco, Ihchichiaee. At the base of Extended Mountain (Awaxaawakussawishe) in the Big Horn Mountains, he saw the seeds as "twinkling stars" (McCleary, 1997, p. 18). This initial locating and planting of the tobacco seeds became the genesis of the Crow's Tobacco Society. In the Tobacco Society, one of the chapters is known as Ihkammishe, "The Stars."

The Apsaalooke recognize four different types of visions. They differ not only in their defining characteristics, but also in the amount of power which they provide to the individual who experiences them. One type is the everyday dream, experiences which have no revelatory import. Next, there is the painless vision, an experience which is simply given to the human visionary by the Being involved. This human is considered fortunate to have received a vision without enduring the hardships normally required. Third, a vision is revealed to an involuntary sufferer in a time of great crisis. This vision serves to give the visionary the power to survive his or her intense
personal hardship. Fourth, the sought after stress vision is a revelation received as the result of self-induced suffering. That is, some would-be visionary subjects him (her)-self to a pledged ordeal in order to be rewarded with a vision. This is considered the most powerful and prestigious vision (Miller, 1979).

The initial phase of fasting for a vision is devoted to preparation. A purifying Sweat Lodge rite is the essential feature of this process. In this rite, the purifying steam which rises from heated rocks and the prayers which accompany it purify and strengthen the visionary’s concentration for the ordeal ahead. These individuals abstain from food or water for three to four days (Miller, 1979).

The evidence of reference to nature’s resources is present in many forms. The Apsaalooke term for clan is ashaammaliaxxia, which translates “As driftwood lodges.” This term is used because of the way the clans cling together like the driftwood along the banks of the rivers (Frey, 1987).

General Knowledge

The teachings of seven entities; the heavens, air, fire, earth, water, plants, and creatures provide the basis of Crow beliefs. Their precepts have shaped the innate understandings of Crow
nationhood. They have become the guiding force of an entire lifeway, providing our sense of right and wrong and our attendant sense of values and ethics. Dale Old Horn (cited in McCleary, 1997, Prologue xviii)

Crow people describe the heavens as a plane that over arcs the earth. In this realm the sun, moon, and stars dwell with the clouds and the birds (McCleary, 1997). The heavens that McCleary (1997) writes about are the stars of the universe. The Crow people studied the constellations in their relationship to the position of other stars or constellations. With the Crow people each constellation has a story, myth or legend as well as a name. These stories include persons or animals which somehow became stars or the constellations. The positions of constellations were used for the indication of changing seasons.

A star that is used to indicate seasons is the Bright Star, or *Sirius*. Old Woman’s Grandson, the offspring of a human, told the Crow that he was afraid of newborn buffalo calves, so he would not appear when buffalo were calving, an event of the spring. Thus the disappearance of *Sirius* from the night sky indicates spring is near (McCleary, 1997).

The Goose Above or *Cygnus*, indicated when late fall had arrived. The Hand Star, a portion of *Orion*, indicated the beginning and end of winter; the Bear Above, *Hercules*, indicated the approach of Spring. Campsite Star, a portion
of Corona Borealis, indicated the progress of summer. Weasel Star was studied throughout the year, but the purpose of this observation is not clear (McCleary, 1997).
CHAPTER 3

DESIGN OF THE STUDY

Procedure

In this descriptive case study, data was collected using several different methods and approaches. Methods included formal interviews and opportunistic conversations, participant observation, observation, and document reviews. The research used naturalistic inquiry, personal contact, and insight. It was adaptive and flexible to changes in the research design when the need arose.

Naturalistic inquiry is the study of real-world situations as they unfold naturally; it is non-manipulative, unobtrusive, and non-controlling with openness to whatever emerges and a lack of predetermined constraints on outcomes (Patton, 1990, p. 40).

Personal contact and insight occurs when the researcher has direct contact with and gets close to the people, situation, and phenomenon under study; the researcher’s personal experiences and insights are an important part of the inquiry and critical to understanding the phenomenon (Patton, 1990, p. 40).
Design flexibility means to be open to adapting inquiry as understanding deepens and/or situations change; the researcher avoids getting locked into rigid designs that eliminate responsiveness and pursues new paths of discovery as they emerge (Patton, 1990, p. 41).

Research data was collected from several sources. Some sources were from opportunistic conversations and formal interviews with Crow elders and other Crow tribal members. Opportunistic conversations were noted when casual conversation led to information that was of importance to the research. Formal interviews were arranged appointments with the Crow tribal elders. The formal interviews took place in the natural settings of the Crow elders. This form of an interview is known as naturalistic inquiry. The inquiry takes place in the natural setting in which the phenomena occurs (Rowland, 1994). Finally, the research included a review of Crow Tribal Archives to locate any significant information related to the use of natural resources by the Crows.

Population and Sample

Formal interviews were conducted with willing respected Crow tribal elders who are known to the Crow people as having stories and historical knowledge of natural resources used by the Crow. The population of the personal interviews
was Crow tribal members living on the reservation over the age of 50. The population of this age group is 762 (BIA, 1996). The number of elders available for interviews dropped because of the age of some of the more elderly members who did not have the capacity to conduct a full interview. The percentage of elders in the selection pool was reduced some more when elders were identified based on their expert knowledge in the area of the Crow's historical use of natural resources. Names of elders were collected and compiled in a list of potential interviewees. The list of names came from asking clan elders to identify Crow tribal members who may have knowledge of the historical uses of natural resources, who were mentioned by other informants or who were mentioned during an interview. When a name was mentioned several times by different informants, the person identified on several occasions was chosen for an interview. The sample size was 13 individuals. The interviews were semi-structured and tape-recorded if the parties were agreeable.

Data Gathering

The interviews were conducted in a manner that respected and honored Crow traditions for requesting knowledge from elders. These interviews were conducted
acknowledging the Crow way of providing information through
story telling.

The selection of elders to be interviewed included
several processes. One of the processes was to identify
individuals recognized through the Crow culture as people
with historical information. Some of these individuals were
eliminated from the pool of elders considered for interviews
due to cultural restrictions. Culture restricts Crow males
from personal communications with their mother-in-law(s),
the spouse(s) of a brother-in-law(s) or male cousin-in-
law(s), and his spouse's grandmothers and grand-aunts, both
maternal and paternal. This restriction includes blood
relations, relations through adoptions and also through clan
relations.

After informants were eliminated based on these
restrictions, individuals were selected based on their
expert knowledge of Crow oral history. These interviews
included offering gratuities, giving informants the liberty
of speaking Crow, having patience in letting them speak and
tell the whole story, and honoring their wishes about the
ways the information may be used. These interviews were
conducted, acknowledging the Crow way of providing
information through storytelling.

The accepted way of conducting an interview in
mainstream society would be perceived by most elders as
insensitive and disrespectful, and such an approach would be treated with indifference. The best approach for obtaining information from Crow elders is to respect their ways of providing information. Sometimes an intermediary is needed to intercede on behalf of the individual seeking information. The intermediary is usually a person well known, respected, and trusted in the community as a good speaker who knows Crow culture. Much information is disseminated through the use of storytelling. In the Crow culture storytelling is usually reserved for when there is snow on the ground. However, some elders may choose to continue sharing information with no snow on the ground.

The gathering of information in the Crow culture is different from interviews conducted in the Euro-American culture. Once a story begins, the speaker cannot be interrupted to ask specific questions. When a speaker is interrupted while a story is being told, the interruption is viewed as showing disrespect toward the speaker. The interruption may also indicate that the listener regards the story as unimportant. Any indication of disrespect would preclude any further interviews with that specific elder and might hamper interview efforts with other elders, once word got out of the incident. However, there are interactions between storyteller and listeners. Responses are encouraged but must not disrupt the flow of the story. When the
storytelling is over, questions may be asked about areas not covered. The storyteller may answer these questions or decide that enough information has been given for that day. The person seeking information must come back another day if they need additional information from that particular individual.

The information sought from the stories was to answer specific questions. These questions were:

1. How will knowing what types of natural resources used historically by the Crow assist in the continuance of that knowledge?
2. How did Crows learn which natural resources could be used and how they could be used?
3. Were there any rituals connected with the use of these natural resources?
4. What values were placed on knowledge of particular natural resources used?
5. How was knowledge of natural resources retained for the generations that followed?

Information obtained from the interviews was sorted and documented by relevance to each natural resource topic. This information indicated how natural resources were perceived historically. Opportunistic conversations were of research-related information obtained through conversations with friends, family, and colleagues who are members of the Crow Tribe.

Archival and literature research was conducted to find documents written or endorsed by Crow members regarding
natural resources. This information was interwoven into the research where appropriate.

Crow Customs

The elders' support and respect of the research and their acceptance of its validity was critical to the success of the information gathering. To gain alliance with the Crow tribal elders, the Crow customs were recognized and implemented into the study.

Elder Identification

In order to follow Crow cultural norms in beginning this study, advice was sought from Crow friends, relatives and clan parents on how to proceed. Selected individuals continued to provide guidance for the duration of the study, and each step of the research process was taken with great care not to offend Crow cultural norms.

The first step of the process was to identify Crow elders from my sub-clan, which is the Greasy Mouth Clan. I belong to the Greasy Mouth Clan and also am a child of the Greasy Mouth Clan. A person usually follows the blood lineage of their mother and becomes a child of the father's clan. My mother is not a Crow tribal member, so there is no clan blood lineage to follow on my mother's side. My father is a member of the Greasy Mouth Clan; therefore, I am
following both blood lineages of my father, which are the clanship and sub-clan of the Greasy Mouth. Elders from this clan are either Clan Uncles (Aasahke) or Clan Aunts (Isbaaxia) who can provide blessings and guidance for the research and the researcher.

The next step was to identify Crow elders who had pertinent information of Crow historical use of natural resources. A list of names of potential Crow elders who might be interviewed was collected. Information was gathered about where they live, how to get to their place of residence, what their clan affiliation is, what relationships might pertain to the researcher (me), and what their household status is.

Seeking Guidance

The mainstream institutional process of seeking guidance in conducting this dissertation research was through the graduate committee chairperson and its members. The graduate committee provided guidance in meeting what were acceptable and proper requirements for a doctoral dissertation.

As with the institutional process of seeking guidance, there is also a process that must be followed in Crow culture. This process of seeking guidance according to Crow customs was required for the research to be viewed as proper
and acceptable in the eyes of the Crow people. A step-by-step process was followed so Crow cultural norms were not offended.

In the conception of the idea of pursuing research about the historical uses of natural resources by the Crow Indians, a personal confidant was my wife Deborah Yarlott. She was instrumental in reminding me of the Crow cultural traditions, values, and beliefs that may impact the study, and she has been assisting as a co-researcher due to the complexity of the Crow value system. When the word researchers is used, it refers to my wife and me.

David Yarlott, Sr., my father, was informed of the nature and scope of the research. He provided encouragement and valuable insight to the different situations the researchers might confront. A suggestion was made by Mr. Yarlott to visit my aunt, Rosaline Morrison (now deceased), who had more knowledge about the Crow culture. Mrs. Morrison complimented my educational accomplishments and encouraged me to complete my educational goals. She provided names of some of the Greasy Mouth Clan elders and presented a portion of each individual's historical background.

The approval, encouragement, support, and information from these three people were critical to the success of the research, because family kinship and blessings from family
members are held in high regard in the Crow way. Three friends, Randy Pretty On Top, Lanny Real Bird, and Victor Singer assisted in the research by identifying other Greasy Mouth Clan members with potential information, by sharing experiences about how they have approached Crow elders to seek information and recounting stories they had heard from their elders, and by giving the researchers ideas about how to form specific questions.

Clan Uncle

My Clan Uncle, Larry Plain Bull, Sr., who is a member of the Greasy Mouth Clan was chosen as the person who would be asked to provide guidance and blessings for the research. The selection was based on Mr. Plain Bull's knowledge of the Crow ways, the respect shown to Mr. Plain Bull by other Crow tribal members, and the researchers' familiarity with Mr. Plain Bull.

Several phone calls were made attempting to reach Mr. Plain Bull. Phone contacts informed me that Mr. Plain Bull did not have a telephone, but his wife, Gwen Plain Bull, worked for one of the schools in Pryor, Montana. The first phone call to Plenty Coups High School resulted in gaining information that Mrs. Plain Bull worked for St. Charles Mission, a Catholic K-8th Grade School, and a phone number of St. Charles Mission was given. In calling St. Charles
Mission School, I was informed that Mrs. Plain Bull did work at the school as a teacher and might be available to come to the telephone, because they were at a break between classes. The wait was short when Mrs. Plain Bull announced herself on the other end. After a short exchange of greetings, of questions about the well-being of family members, and of answers to the questions, I asked if her husband might be available for a visit on a weekend. I explained the purpose of the request, and we made arrangements to meet on the following Saturday morning at Mr. and Mrs. Plain Bull's residence in Pryor.

Because of a death in my spouse's family, I was asked to be a casket bearer for the deceased and missed the appointment. After the funeral, we traveled the 80 plus miles from the researchers' parents' house to Pryor, mostly on narrow, two-way paved roads, in hopes of finding Mr. and Mrs. Plain Bull at home. It was dark by the time we reached the Plain Bull residence. A teenage boy answered the door and told us that Mr. and Mrs. Plain Bull had gone to Billings and would be home late. A message was left with the boy that we would return the next morning.

The next morning, after a night at a Billings motel, we traveled the 35 miles to the Plain Bull residence. Fortunately for us, the couple were at home. After an exchange of greetings and pleasantries, we were invited to
sit at the dining table. Cups of coffee were poured, and a box of donuts was offered. The invitation to sit and the offering of food and beverage is a Crow custom.

After getting comfortable, I asked if the conversations could be tape-recorded for documentation and future references. Mr. Plain Bull agreed to be tape recorded and gave consent for his name to be used in the documentation of the research. I explained that the purpose of the visit was to ask Mr. Plain Bull, a member of the Greasy Mouth Clan, who is one of my clan uncles, for advice and guidance on how to proceed with the research without offending Crow cultural norms. A part of the explanation given was that the research conducted by the researchers would consist of interviews with Crow tribal elders on the historical uses of natural resources by the Crow Indians. The research was a partial requirement for completing a doctoral degree at Montana State University in Bozeman. The researchers' wish was for the research to be used for educational purposes: to learn about natural resources used historically by the Crow people, to preserve and protect this Crow knowledge, and to build a foundation to retain the knowledge for future generations, for both the Crow people and those people who have concerns in these areas.

Mr. Plain Bull began by recounting personal experiences and stories told to him by elders. What followed was a
lengthy reminiscing about the many changes in the Crow way of life and Crow traditions, so that many practices are not original anymore. The Catholic religion and the United States government contributed significantly to these changes. In times past, medicine bundles and medicines were used to assist Crow people. “Today, some of the purposes have changed; some is good and some is bad” (L. Plain Bull, personal translated communication, 1997). Two Crow traditions still practiced today are the Sweat Lodge and the Tobacco Society. Mr. Plain Bull’s (1997) belief is that the Euro-American’s religion is not the only right way, “It is not so. We are Crow people and we can believe in God and the Son of God, Jesus Christ and still be Crow people.” “As long as Jesus Christ is put at the forefront of what is done, nothing can go wrong.”

The topic changed to stories of Mr. Plain Bull’s experiences in fasting, his knowledge of the Sweat Lodge, and his knowledge of the natural resources used by the Crow people. He explained the proper procedure to approach clan elders for help when an individual is going to partake in an event or is faced with a situation. Individuals are also encouraged to participate in a Sweat (Sweat Lodge Ceremony) to purify themselves.

When Mr. Plain Bull began to explain how to approach elders, he mentioned that “the elders are aware of a lot of
things and they tend to check individuals over, so be patient.” He advised not to rush into asking questions about the research, but to ease into it. He suggested that I should ask how they are doing and talk of trivial things before explaining why I have approached them. He explained that I should let them know where I live, that I am going to college in Bozeman and that I am conducting a research that pertains to the Crow people. He advised, “Start off with something like, ‘you are an elder, you have a lot of knowledge from all these years of living, you have gone through a lot of hardship, and that is why I am here.’” He advised to offer them food, a smoke, or other gifts (personal translated communication, 1997).

Mrs. Plain Bull (personal translated communication, 1997) asked my wife what my Crow name was. My wife responded that I didn’t have a Crow name. Mrs. Plain Bull said that it would be appropriate for me to have a Crow name before continuing the research. She said, “It would be good if he had a Crow name and has it included in the research. Ask him [referring to Mr. Plain Bull].”

To have a Crow name and to include it as part of the research would help to validate the research in the eyes of the Crow people. Mr. Plain Bull gave some examples of the ways Crow names came about. One case he mentioned was his grandson who was born prematurely and was weakly. He had a
dream one time of a young boy with a white hat, who was energetic, full of vigor, and was always pestering and teasing other children. Each time the boy would come around, they would warn each other, "Here comes White Hat." He named his grandson after the young boy of his dream, White Hat, and today his grandson is energetic and goes around teasing and pestering other people just like that boy in his dream. Mr. Plain Bull mentioned that names were given with a purpose in mind (personal translated communication, 1997).

Mr. Plain Bull stated that it is good to have a naming ceremony where there is a large group of people gathered in one area. In this way, more people will know the person's given name, and it will spread amongst the people faster. Mrs. Plain Bull said:

There will be a Clan Day in Pryor the Tuesday before Thanksgiving. That will be a good time to conduct the naming ceremony. (Personal translated communication, 1997)

I mentioned that it would conflict with my college courses, "Tuesdays are my class days and the Tuesday before Thanksgiving is a day that I would have to be a discussion leader in one of the classes." The Plain Bulls said that if it didn't work out for that day, another time would be fine, but it would be good to have the naming ceremony soon. I responded that I would look into changing dates on my being
a discussion leader for class and being excused from my other classes for the Clan Day at Pryor; then I would get back with them on the results.

We gave Mr. Plain Bull four gifts for the advice and information provided. This is the Crow way of exchange: the gifts for the advice, prayers, and information. When we mentioned that we needed to leave to visit with another elder, they asked us to stay and eat with them before leaving. This is a Crow custom, that visitors are fed when they come into their homes. Before leaving the Plain Bull residence, we were given some deer meat to take home with us. The deer had been killed by a grandson the evening before. This is another Crow custom, that people share with others when they have extra. The time spent at the Plain Bull’s was approximately four and one-half hours.

These Crow customs that were followed are common courtesies extended to guests in Crow homes. To turn down these invitations and offers of hospitality would be considered rude. For the consumption of food, a person need not eat all that is placed before them. Indication of gratitude and eating a small portion of the meal is enough to satisfy the elders.

As for the element of time, in the Crow culture the 24-hour time frame is irrelevant. When an event is going to occur in the Crow environment, the event will occur when the
time is right, when all participants in the event are present and will occur for as long as it takes to finish the event. The elements of the environment influence time, not the people selecting a specific time frame. In Indian communities, whenever an event is to begin at a specified time, but is late in getting started, it is referred to in a teasing manner as, "it happened according to Indian time."

In researching indigenous people, it is important to conduct research of cultural etiquette before beginning the main study. Approaching the research respecting the appropriate cultural etiquette provides a broader range of acceptance by the people. Acceptance from the people leads to an increased willingness to provide assistance. The willingness of the people to assist the research provides the researcher with information that turns into knowledge, which then leads to learning. With this process, learning has gone full circle.

Sacred Site Visit

The next stop was at Joe and Clara Rides Horse-Smells' residence, also in Pryor. The main purpose of the visit was to ask Mrs. Smells, a relative of my wife, for some advice regarding Crow customs and to seek information on natural resources. An explanation was given about the research and the plans for the research. She was asked if the
conversation could be tape-recorded. She agreed to the tape-recording for purposes of the research, but not for any other person to have access to the tape. She wanted some of the names of people and places left out for protection of sacred sites, and for protection of families regarding certain events. Other pertinent information could be used, and the names of the people and places could be changed for the protection purposes. Mrs. Smells then asked how she could help us in the research (Clara Rides Horse-Smells, personal translated communication, 1997).

When presented with the purposes of the research, Mrs. Smells repeated many of the things that Mr. Plain Bull had mentioned. She went on to tell some of the stories she had heard from her elders regarding the use of natural resources by the Crow people, but there were some stories that she could not remember at the moment. She mentioned that her mother would be a good source of information if there was a return visit planned. We mentioned that we would return for another visit after restructuring the format of the questions to be more appropriate for the information requested. Four gifts were given to Mrs. Smells for the assistance she provided. Before we left, we were invited to eat with the family (Rides Horse-Smells, 1997).

After eating, Mrs. Smells offered to take us to a sacred site, to offer prayers and ask for blessings of the
research. This offer was most generous and appreciated especially because Mrs. Smells had been injured in a fall recently and could barely move around. Mrs. Smells, my wife, and I got into a small two-wheel drive Mazda truck I owned to journey more than ten miles on a rough, rocky, two-track road to the site. Mrs. Smells served as the guide and gave directions on where to go and when to stop. After I stopped the vehicle, Mrs. Smells got off and, walking with a limp, led us to the site and instructed us what to do.

On the return trip to drop Mrs. Smells off at her residence, I realized that with winter coming on and many similar trips on long, rough, and unimproved roads, a four-wheel drive vehicle would be needed to conduct interviews with the Crow elders. This was an unplanned expense, but a necessary one if the research was to be completed on the Crow Reservation.

Upon returning to Bozeman, I approached my instructors at Montana State University-Bozeman with my wish to partake in this naming ceremony. My request was enthusiastically embraced and encouraged by the instructors and also the doctoral committee members. The Plain Bulls were contacted that my wife and I would be present in Pryor for the Clan Day and would be ready for the naming ceremony.
Pryor Clan Day

After the arrangements were made to be at the Pryor Clan Day, we began to accumulate gifts for the naming ceremony. I traveled the 210 miles from Bozeman to Crow Agency several days before the event to meet my wife for final preparations.

The Tuesday of the Clan Day, we left for Pryor early in the morning from my parents' house. It was raining when we left the house. After we traveled 30 miles, the rain turned to snow. After another 20 miles, the snow got heavier, and the road became slick with packed wet snow; visibility became a problem. We were able to make it to Pryor without any problems, except for some lost time due to traveling slowly. This trip reaffirmed the necessity of purchasing a four-wheel drive vehicle.

We reached the St. Charles Mission School, following and being followed by many other vehicles. Upon entering the school, people were directed to different classrooms according to whichever Clan they were members of. We sought out Mrs. Plain Bull to find out where we needed to be. We were instructed to sit in with members of the Greasy Mouth Clan and observe.

The naming ceremony would be conducted later when everyone congregated in the gymnasium for the noon clan
feast. In each classroom, each child invited a Clan Uncle or Clan Aunt to come join them and offer prayers for that particular child; then each child presented gifts to their clan elder. At a clan feast the children of the school sit with their clan elders and eat with them.

**Naming Ceremony**

All the students of St. Charles Mission, the teachers, the staff members, and the invited guests were asked to congregate in the gymnasium just before noon for the clan feast. Plates of food were distributed to all persons present, and the children brought juices and coffee to their seated Clan elders. When most of the people had finished eating, the naming ceremony began. One other person was given a Crow name before my naming ceremony. A Crow individual was announcing the proceedings over a public announcing (PA) system. He gave an explanation of what was happening and the purpose of the event.

After the first naming ceremony, the announcer mentioned that there was a second naming ceremony. He went on to tell the people about my background. In his explanation, the announcer mentioned a brief account of my research and my educational accomplishments. He went on to let people know that I was a member of the Greasy Mouth Clan and had approached Larry Plain Bull, my Clan Uncle for
advice on the research. The announcer explained that when it was discovered I did not have a Crow name, Mr. Plain Bull was more than glad to provide me with one.

My name was called, and I was asked to approach where the announcer and Mr. and Mrs. Plain Bull were standing. The microphone was turned over to Mr. Plain Bull, who then told the crowd of a vision he saw during a fasting trip many years ago. He explained how he had given a Crow name to my brother the previous year at the Pryor Clan Day. Then he told how he came up with the name he was giving me. Mr. Plain Bull stated, "This young man will be known as Anbalaxuux Xiassash (Outstanding Singer); start calling him by this name." I turned, shook his hand, and thanked him for the honor. I then gave my Clan Uncle four gifts for this honor. I started back to my seat and was called back to the announcer's area. Mr. Plain Bull wanted to bestow me, his Clan child, with an honor song he had heard during a fast. In the Crow way of singing praises or announcing accomplishments of a Clan child, he began to sing this honor song, accompanied by his wife, Mrs. Plain Bull.

My child, whatever makes you happy, makes me happy. I am God. My child, whatever makes you happy, makes me happy. I am God.
During the honor song, my Clan relatives, Greasy Mouth kids, approached Mr. Plain Bull and presented him with monetary gifts for the honor he was bestowing on their clan brother.

**Language and the Translation Process**

All interviews were conducted in the Crow language. The translation took place in four steps. First, the interviews were conducted in Crow language, which was tape-recorded and then transcribed verbatim in the Crow language. Second, the vocabulary was translated into the English language as close to verbatim as possible. We researchers did most of the translation with the aide of a Crow dictionary (Hardin School Districts 17H & 1, 1987). Some of the Crow words were not in the Crow dictionary, and other Crow speakers were asked to assist in the translation of these words. Some of the Crow words did not have any translations into the English language, so words or descriptions that came close were used. However, the verbatim translation created sentences that made no sense. Third, the seemingly meaningless sentence structure was translated into the English language in such a way that would make sense for the readers (See Appendices).

Fourth, the translation was interpreted back to Crow language to see if any meaning had been lost in the
interpretation. This process was time-consuming but necessary to grasp the true meaning behind the words.

After the translation was completed, to ensure accuracy, a triangulation method was followed. Other knowledgeable Crow members were asked about specific words, stories were compared with other interviewees, and some of the interviewees were asked to review the translations for accuracy.

It is critical to the research that the researcher has an understanding of the Crow culture and language to provide a true sense of what is being said. To be readily accepted, it helps to be someone within the Crow culture. Researchers from the outside may not get all the details of a story or may even interpret stories in error. Insiders have an advantage of knowing and being a part of the culture and having support and encouragement from the very people they are researching.

**Researcher Effect**

Because I am an enrolled member of the Crow tribe, the interviewees might have been willing and cooperative even if I had not followed Crow cultural norms such as seeking advice from clan elders, participating in Sweat Lodge, and being given a Crow name. However, even with the assurance of being an enrolled Crow, I chose to follow the proper
procedures of the Crow way, respecting and honoring the Crow traditions and practices. Following Crow protocol ensures the acceptance of the research as valid in the eyes of the Crow people. I felt that it was much better to avoid oversights that might negatively affect the research.

Summary

The methodology used in conducting this research was appropriate for the environment. Preferred research practices from mainstream society would probably not work. Information could still be gained through the usually preferred process, but the results would be skewed toward the views and perceptions of the mainstream society. Acceptance by the people interviewed was very important in interviewing the Crow Tribal elders. The process of being "accepted" was an experience I will never forget. Even though I had observed some of the events previously and had participated in some traditional practices previously, the personal nature of the events gave them a special meaning. This made the research more personal for me. With this feeling, I reevaluated the research process and the people involved.

Every step of the research process was taken with care, observing traditions and Crow cultural norms. From the very beginning of the research to the end product, I was blessed
with prayers, guidance, experience and knowledge. This guidance was provided by my wife, friends, family and clan elders.
CHAPTER 4

MOTHER EARTH

Introduction

Just as the land has capabilities and limitations, the people living on it have needs and desires: food, clothing, shelter, health care, education, employment, clean air, water, and recreation to name a few. These needs must be met, but met in a manner that will not degrade the land, for degradation would ultimately threaten the long-term well-being of the people. (Center for Citizens Initiative-USA, 1996, p. 32)

At times it was difficult to determine whether the Apsaalooke elders were talking about the past or present. In storytelling, they talk of past events as if they are happening now, in the present. In many ways this is true; the Apsaalooke people practice many of the traditions that have been passed down through the generations. The storytelling has historical information that is part of family history. In this fashion of storytelling, learning and therefore knowledge was kept in the family. Because of this type of transference of knowledge, viewpoints of historical events differ from family to family. They also differ among the existing five clan groups and from the different ancestral bands. Versions of particular stories
vary depending on perceptions of the original storyteller. At times, myths and legends are incorporated into the stories to make a point or in reference to a topic.

In going back to the varying versions of information, one might wonder which is the true version. This would be the way an empirically trained Anglo-American would look at the situation. In Apsaalooke culture, all versions are true. Perceptions differ according to the level of involvement or location of the original source of information. Truth is how history has been interpreted according to the perceptions of those who were originally involved. These stories handed down from past generations are part of Apsaalooke oral history. Oral history in many occasions becomes the primary learning tool in the Apsaalooke culture.

In the Apsaalooke culture, the learning of critical factors of survival is reserved for people who are capable of and responsible for carrying out such duties. Even with families, an individual was chosen who showed maturity, responsibility, willingness, assertiveness, and caring toward the acceptance, administering and transference of knowledge to others.

This chapter contains information gathered from personal interviews with Apsaalooke elders, from documents,
and from participant observations of historical uses of natural resources by the Apsaalooke Indians.

The search for information sources proved to be difficult. Of the 762 Crow people over the age of 50, only 37 elders were identified by the informants as possible sources for the study. The difficulties arose when leads to information netted very little information. Individuals would be named as people who had knowledge of traditional uses of natural resources. Informants themselves had heard some of the stories told by these particular individuals. If the named individuals were mentioned several times by other informants, I would pursue that lead. Upon setting a time for an interview and proceeding with the research process, I would find that the interviewee's storytelling was limited to the same stories that had been shared by others. There was nothing further. The informant's historical knowledge of traditional Apsaalooke uses of natural resources did not extend beyond what was already shared.

On several occasions, identified elders chosen as potential interviewees fell ill and became inaccessible as study informants. Three passed on to the other side camp (death). The Crow Reservation community being relatively small, almost everybody knows each other. I knew these three elders personally. What was different about these
three elders was that they, at some points of my life, had been influential in my learning of the Crow Culture. I was able to visit two of them at the hospitals before they passed on. One elder, I felt, would recover from the illness; the other was in a coma. The one individual I was able to converse with, asked about my educational progress. He encouraged me to let nothing stop me from completing my educational goals. Even though it took a lot of effort and energy for him to communicate, his verbal and body expressions indicated his excitement for my research. His efforts tired him out. I asked him to lie back and relax, and I would tell him about my research. After I explained to him the research topic and my purpose for conducting the research, in sign language, he simply signaled, "it is good." That was enough. I didn't tell him that he was one of the selected interviewees. Out of respect for him and compassion for his condition I did not pursue information gathering with him any further. This typifies the delicate process that must be followed in a community where almost everyone knows one another and respect for elders are the norms.

Apsaalooke Resources

After we use them (trees), we take them down, and say, "I have used it well. I have returned it," then I put it in the river. They do not over do
In the Apsaalooke worldview, everything in their living environment is considered natural. The elements of the living environment are in the air, water, animals, plants, atmosphere, fire, and earth. These represent the holistic natural environment and potential life of the Apsaalooke people. All these elements were essential to the livelihood and survival of the Apsaalooke people before Euro-American contact. In Apsaalooke culture, humans are a part of nature, not something separate and above nature. In contemporary views, natural resources are those things that are created naturally from the earth, water, air, growth, and birth. In many ways, these views are very similar, but in contemporary views, humans are normally not included as natural resources.

**The People As a Resource**

The first and foremost important natural resource in the Apsaalooke way of life is its people. From the newborn to the very elderly, each individual is a very important component to the natural living environment. Joseph Bear Cloud (1998) said, “Human resource is a natural resource. That’s why we are people” (personal translated communication, 1998).
In this section, the topics are developed in the manner that is appropriate to the Apsaalooke. Appropriateness is not to change what was actually spoken. For the Apsaalooke people, events occur at the right time and do not follow a linear time line. As in other Indian cultures, time is circular. The topics may follow this same pattern, where they may overlap and/or return to a previous topic. In writing direct quotes, any changes made for readability take away from the real meaning. Language and quotes have been translated and interpreted as close to verbatim as possible. However, sometimes the interpretations are difficult when there are no direct translations into the English language.

**Basic Needs**

The Apsaalooke people use many natural resources in the same way as their ancestors did. Some resources from nature still supply food, shelter, tools, weapons, medicine, beverage, and knowledge, and are used for spiritual purposes. Other resources that the Apsaalooke utilized historically have disappeared completely or have been displaced from the local area. An example of the disappearance of a resource is illustrated in the following quote by Bull Tail:

My father died at 85 in 1984. “Today,” he said, “most of the plants used before are gone, the plants, roots. Like potato black, a plant called
foot sore don’t grow anymore, large onion and something like the onions, wolf finger, (Chateiischubhe), black turnips/potato black, we looked for them once and didn’t find any, kind of potato, but different, smaller. Potatoes when they are spoiled, they are blackish. It’s kind of like that color.” Most plants that they use for healing don’t grow anymore. Buffalo don’t eat, there is no more around here, were used for women sickness. Some of the birds are gone, plums, large owl, owls are gone. Some small birds, there are no more. These birds spread the seed. The birds are gone too. When the birds spread the seeds, that’s how they grow. The birds are gone. Plants are gone. (Bull Tail, 1998)

The disappearance of plants and animals were directly related to the settlement of humans in the environment. With the settling taking place, the interrelatedness of elements in the ecosystem was interrupted. The settlement of humans into the environment and the human activities such as cultivation and industry caused changes in the normal patterns of the ecosystem. These interruptions changed the migratory patterns of some animals and affected the continuation of species of plants.

Many plants were used by some of the traditional Apsaalooke members. Roots, stems, leaves, bark, berries and flowers of different plants were used for a variety of reasons. The use of plants for food was an integral part of survival.

Another elder was asked about the historical uses of natural resources. His response was:
Wild turnips, wild carrots, they are also in the ground, way back, in this reservation here, we too had names for everything. We recognized different kind of good and bad, what we can eat and what to use also. For all of them there was a name. Names are fading away. We are too busy trying to be white. The white in us is getting bigger, and we can't be white. Even the language is fading, we only use about 40% of our language. (Bear Cloud, personal translated communication, 1998)

Not only interruptions to the ecosystem caused the loss of the ways that natural resources were historically used, acculturation into the dominant society also has contributed to the diminishing knowledge. Language has been a key element in retaining information by the Apsaalooke and with the fading of the Apsaalooke language, the risk of losing more natural resource knowledge becomes higher.

Food:

After moving into the Plains, the Apsaalooke people were not recognized as an agrarian people; however, they still harvested many native plants for nutritional purposes. In the use of plants by the Apsaalooke, medicinal purposes is usually what comes to mind.

The roots of wild carrots, or squaw roots, which are found in open areas are skinned and eaten when the plant is in bloom. The bloom indicates that the plant is ready to be picked. The roots are dried and stored for the winter months (Walter Onion, personal translated communication, 1998; Harold Stone, personal translated communication,
1998). They can be found in open fields near water or on top of hills. Elizabeth Smart Enemy (1998) recalls going to the mountains to dig this plant, much like her ancestors did. This plant is called Bikkaasahte or translated, Forked Grass. The plant is Yampa (personal translated communication, 1998).

The wild turnip or ihe is normally found on hillsides (David Yarlott, Sr., informal translated communication, 1998). This plant is a root vegetable that can be eaten freshly picked around the month of June after the spring rains (Clara Rides Horse-Smells, personal translated communication, 1998). The skin is peeled and dried. They are stored this way or sometimes are pounded into a coarse meal. Historically, a stone maul and a dish made from rawhide were used to mash the root (Stone, 1998).

Wild potato or mealy roots are picked when the white or pink blossoms bloom. They grow where the soil is moist, usually near creeks and in areas where the snow has just melted. The sego lily or issheelooshes (burned on the top of the head) bulbs are also eaten. They are boiled or eaten fresh. They have a sweet taste (Smart Enemy, personal translated interview, 1998).
Rosebush (*Rosa nutkana*) or *bîchkape* (dogs nose) are gathered after the first frost. They are stewed in stock or water and mashed when cooked. They are eaten in the concentrated state as a snack or roasted like a marshmallow. The rose hip is a source of vitamin C (Alma Snell, personal translated communication, 1998; Smart Enemy, 1998; Bull Tail, 1998).

Wild parsley (*Musineon divaricatum*) or *baaisaashishpîte* (black root) is a plant that can be cooked or eaten fresh. It has a sweet and pleasant taste. This plant grows in open meadows (Toineeta, 1970).

Indian rhubarb, cow parsnip (*Heracleum lanatum*) or *baaxalaxxate* (Those that are skinny) grows along creeks near the mountains. They are picked and boiled for consumption (Rides Horse-Smells, 1998). They have other uses aside from being a food source:

They are kind, kind of like rhubarb, it’s hollow. They used to put berries in there and mix. We used to eat them by dipping a stick into the hollow and licking the stick. (Deborah Yarlott, personal translated communication, 1998)

The bitterroot (*Lewisia rediviva*) or *baaisaaxaawe* (bushy root) is used for many things aside from being a food source. Most of the other uses are for medicinal purposes (Comes Up-Not Afraid, personal translated communication, 1998; Rides Horse-Smells, 1998). In an interview with
Elizabeth Smart Enemy (1998), she recalled gathering, peeling and eating, drying and storing these plants (personal translated communication, 1998).

Tarweed (Madia glomerata) or chilapisbaailichitches (buffalo bull perfume) flowers are sometimes eaten when in bloom. They are boiled and have a bitter taste (Toineeta, 1970).

Early in the summer, the women would gather and prepare different species of berries. Some would be picked for immediate consumption, but most of them were dried, preserved and stored for winter use (Bull Tail, 1998; Rides Horse-Smells, 1998; Onion, 1998; Snell, 1998). Baachuua (cherry) or choke cherry (Prunus virginiana), baachuuawuuleete (hollow berry) or June berry (Amelanchier alnifolia), baalishhisshhe or buffalo berry (Shepherdia canadensis), buluhpe or wild plum (Prunus americana), bicheechihthe or gooseberry (Ribes spp.), balawuuleetbaachuua (hollow wood berry) or elderberry (Sambucus melanocarpa), daxpitchishtasshe (Gleaming bear's eyes) or wild grapes (Vitis riparia), kapiliashte (Like trimmed) or huckleberry (Vaccinium globulare), baaxuhke or raspberry (Rubus idaeus), bicheechihtashipite or black currant (Ribes cereum), and bicheechihtashiile or yellow currant (Ribes aureum) were all berries utilized as a food source by the Apsaalooke people.

Other berries utilized in the past have disappeared or are no longer used (Bull Tail, 1998; Smart Enemy, 1998). The following statement emphasizes the inability to translate the proper English terms:

Poopahtate, I don’t know the English name, it’s a little berry, stems have sharp thorns. It makes the best pudding, but it’s the hardest to get. Buffalo berries are the same, yellow goose berries are similar, they are yellow. It is found along the banks of water. Another one is called, biidusche they go toward water, they are white, real small. My grandfather when he was still there, he grabbed some and ate it, he made it look like it was really good, so I got some and followed suit. It was really something, it was really bitter, he was eating as if it was not sour. I didn’t eat it anymore. I don’t know what it is called. In the summer when they get it, if you watch them do it, that is how you will know what it is. (Smart Enemy, 1998)

There was difficulty in trying to translate Apsaalooke terms into English terms when there were no further references. When there is a loss of transmission of this magnitude between Crow speakers, it provides a clue as to why it is so important to retain the culture and language of the Apsaalooke people.

Although, Apsaalooke used plants for many purposes, their main resource in supplying daily needs was from big game. The main source of food consumption became the buffalo.
After moving from the Great Lakes area, the Apsaalooke followed the movements of big game, specifically the buffalo. While this animal became the main source of food among the Apsaalooke people, it also had many other uses. Parts of meat were eaten fresh or prepared, broiled, boiled or dried (Clara Bear Don’t Walk, personal translated communication, 1998; Good Luck, 1998).

What we eat is one thing, buffalo, buffalo is what we ate, buffalo is our main thing. Buffalo, deer, elk, but main one is buffalo. They use everything from the buffalo, what we eat, medicine, some have buffalo medicine. (Francis Stewart, personal translated communication, 1998).

Walter Onion (personal translated communication, 1998) explained the uses and preparation of meat. Other animals were eaten and utilized for a variety of uses. Meat was the main food supply. The meat would be sliced and dried. Fresh meat was a luxury when the Crow people were in camp situations, but their diet consisted of the dry meat that was sliced and hung to dry. The dry meat was the only way to keep meat from spoiling. At times the dry meat would be pounded into a powdered substance to be eaten as is or be mixed with grease and berries into a ball shape, which was eaten much like a popcorn ball is eaten. There was an abundance of different types of deer, elk, moose, other small animals, and a variety of game birds, but these were eaten only on occasion (Onion, 1998).
The Apsaalooke used to travel long distances following the huge buffalo herds. Their movements took them from the Black Hills, to the Wind River Range, through the Yellowstone River Valley, and into Canada. They monitored the movement of the buffalo and when they started running out of things, they hunted and replenished their supplies (Onion, 1998). The Apsaalooke people hunted the buffalo when they were fat, but the people would shy away from hunting them during breeding season, because they would stink and the meat tasted bad during this time (Comes Up-Not Afraid, 1998).

After a buffalo hunt, they would bring the meat into camp. The meat would be combined into one pile and each separate lodge would be allowed to pick meat from the pile. One individual or a single lodge does not benefit alone from the meat, each lodge shares in whatever meat was available (Stone, 1998).

One particular use of buffalo parts was described by Grant Bull Tail:

When they used to go to battle, when we carry meat on a hot day, you know how they spoil, even in one day, don’t know how they know. They get the lung of their prey and clean the shoulder bone and leg bones and are boiled to a soup then until the foam turns into a thick sauce/gravy like. The lung is cooked until it is stiff, like cooked pork rinds. The soup is poured into the cooked stiff lung and it is saturated inside the lung. The liquid cools inside the lung. Meat and fluids are mixed. They slice them and carry them. They do not spoil, and
slices are eaten. They last a long time; they have a lot of energy; this has all the minerals, proteins, calcium, everything that the body needs. They are soft; they are light weight, and easy to handle, very handy where they can take a bite while running. When the men go hunting, this is their food. (Bull Tail, 1998)

Just about every part of the buffalo was utilized in some manner. Aside from the meat, organs such as the tongue, heart, kidneys, liver, lungs, testicles, guts, and unborn calves were eaten. The bone was also cracked and the marrow eaten (Comes Up-Not Afraid, 1998; Good Luck, 1998; Onion, 1998; Rides Horse-Smells, 1998). There are certain glands that are taken from the buffalo that were used for vitamins to gain energy. They kill buffalo, get the glands, and eat them to revive the energy and strength, especially when they were tired and hungry (Bull Tail, 1998).

Beverages

Some of the plants used for beverages were the shusshua (wild peppermint), huckleberry, and chokecherry. The whole peppermint plant—leaves, stems and roots—which grow in the water—were boiled to make a tea for drinking (Bear Don’t Walk, 1998). The plant could be dried and stored for future use. Shusshua tea used to be the Apsaalooke’s coffee in the past (Onion, 1998). The leaves and stem of the huckleberry plant are boiled to make a tea. With the chokecherry, the
greenish second layer under the bark of the stem can also be boiled to make a tea (Stone, 1998).

**Sweeteners**

The sap of *bishpe* or the box elder, when gathered in the spring, can be used as a sweetener in beverages. Other natural sweeteners used by the Apsaalooke are the sap of *bahkashua* (green seed pods) or of the cottonwood (*Populus sargentii*) tree and the honeysuckle (*baleawualeete*) plant. In the spring when the cotton on the trees starts falling, the tender juicy inner bark is harvested. The natural sugar in the inner bark is at its peak. The honeysuckle plant (a plant that is hollow) is also at its peak in the spring when the flowers bloom. The nectar from the stem is really sweet. The plant can be pulled individually and the nectar can be sucked out through the stem (Onion, 1998; Stone, 1998; Deborah Yarlott, 1998; David Yarlott, Sr., 1998; Randy Pretty On Top, personal translated communication, 1998).

Although today we do not think about dandelions, in those days they really used them. Dandelions would be picked, root and all. The plant would be dried in the sun and stored. When needed, the plant would then be boiled to drink. They were used for different ailments. "Dandelions’ are really good for those kinds of purposes" (Bear Don’t Walk, 1998).
Medicinal Plants

Many plants and herbs were used for medicinal purposes. These uses varied, and many plants were used to treat different ailments. Health was an ultimate requirement for surviving the harsh elements. Clara Bear Don’t Walk (1998) may have stated it the best when she said, “I think the Apsaalooke were great in those ways of knowledge. In those days the herbs were what they really relied on for health. I said the bathing in the winter and those things, they were healthy then, they were strong. Today we are not like that.” In reference to the changes from the past, Alma Snell remarked:

We have lost faith in some of the Creator’s substances. Substances he has given us to heal with. They didn’t think our traditional values were important. They left all these leaves and roots to the synthetic medicines. Now after all these years, they are turning back to the natural stuff. The natural stuff, that is why the Crow people were so healthy. The Creator don’t make mistakes. The good things are the natural things. (Snell, 1998)

This is another illustration of how some of the things that were so very valuable to the Crow became less important. With traditional knowledge viewed as less important, the knowledge of the old ways was slowly lost. Reliance on modern technology has taken the Crow people and other peoples of the world away from what is good, the natural things. Snell stated that the Creator does not make
mistakes, but we humans do. It is a good sign that some people are starting to recognize that some things of the past were important, and those things need to be preserved.

Other stories reveal some knowledge of how plants and herbs were used, but the memory of the processes was somewhat cloudy. Steps in the process were lost for a variety of factors.

My grandmother used to tell me, they used Bitterroot a lot, they heal with it. There is a plant in the fall, outside, they are orange, one time my grandfather, he had the hiccups and wouldn’t stop, two weeks. He was going crazy from it. Somebody boiled this orange plant, it cured. the hiccups. These plants, we are people because of these. (Stone, 1998)

Different parts of plants were used to cure ailments and illnesses. Iisee (big root) or bear root was used for many purposes. It is one of the oldest traditional medicinal roots used. It was esteemed so highly that only certain individuals with high status in the tribe could dig the root. These individuals would be medicine men or women and mid-wives who were older. There was a ritual of meditation and prayer before they were dug. Bear root is one of the most sacred types of roots for the Apsaalooke.

There is a process of preparing the bear root for use. A fire is built and allowed to burn down to its coals. The roots are rolled around in the coals to burn off the sticky hairs until the root looks dark brown in color. The parched
burned outer part is chipped off after it has cooled (Snell, 1998). The bear root can be boiled to drink or made into a poultice. Sometimes they are chewed and the juice swallowed for sore throats (Snell, 1998; Onion, 1998). In the boiled state, they are used for the treatment of coughs, chest congestion, colic, and headaches. Midwives used it to aide women in labor to relieve the pain of child birth. Bear root is used as a poultice for reducing swelling on the body parts and as a salve to treat sores (Snell, 1998). Bear root is also used as an incense or an additive for fertilization in tobacco planting ceremonies (Good Luck, 1998).

Alma Snell (1998) told a story handed down by Crow storytellers about the bear root:

Two Crow hunters were caught in a blizzard storm and went into a cave to get out of the storm. They became cold; they went further in and deeper into the cave and came upon a sleeping bear. Well it looked like they couldn't find anything to burn to keep warm, so they decided to get as close to the bear as they could and keep warm. The storm raged on and when the bear moved, the two young men would go aside. Finally they noticed that every time the bear moved, it would lick its paw and go back to sleep. The two hunters became inquisitive about why the bear kept licking its paw. They dared one another to find out. One took up the dare and found the matter tasted like bear root and smelled like bear root. This they told upon their return to camp. Some wondered if the bear root had something to do with the long sleep. Bear root does have a calming effect.
Other plants that involve a ritual in the harvesting besides the bear root is bitterroot or baaisaaxaawe (one with a branched body) and the hawthorne or akbilitchishee. The first plant the Apsaalooke would harvest was usually the bitterroot. Women would have a little pallet, blanket, or something folded to sit on. Each female would start meditating and praying in their own way. Upon completion of the ritual, they would say Aho (Thank you) and start digging. The ritual was not done with every plant, but words of thanks were given to everything harvested (Snell, 1998).

Plants that were used for the healing of coughs or respiratory ailments were rosinweed or baauchpashiilitshia (stinky yellow tip) boiled into a tea, balsam needles or uuxisbaailichitche (deer’s perfume), snakeweed (bisheewaaluuusshessee/what the buffalo won’t eat) for sinus infection, and sneezeweed (iiwaapiiaaxxuuua) to induce sneezing to relieve nasal congestion caused by colds (Toineeta, 1970).

In the treatment of sore throats and tonsillitis, rosebush root (bichkape/dog’s nose) and sweet cicely (bimmxpaalichikua/sweet medicine in water) were brewed into a tea and taken as a beverage. Echinacea was used in the treatment of common colds. Yellow tips or lichen that grow
on evergreens in the mountains were boiled and used to treat sick people. They are bright yellow and sometimes look almost green in color (Bull Tail, 1998).

Apsaalooke employed plants to help women in labor or during childbirth. Rosinweed was used to reduce after birth pains; juniper or cedar (awakochilua) plants were used for stopping hemorrhaging, cleansing, and healing after childbirth; and lichen (peelatchisbale) from willow bark was used as incense to induce quicker childbirth (Toineeta, 1970).

To diminish swelling of body parts, rosinweed, yarrow (chihpachiiskisshe/squirrel’s tail), rosebush root (bichkape/dog’s nose), and snakeweed (bisheewaaluuushissee/what the buffalo don’t eat) would be boiled and made into a poultice or salve to be placed on the swelling to make it go down (Snell, 1998).

Stomach ailments such as diarrhea were treated with the boiled tea of juniper (baailichitchixaape/fragrant flat cedar), rosebush roots, chokecherry (balapua) bark, snakeweed and American bistort (baaichihchishila/root that turns back). Constipation was treated with a tea made from the bark of the American elm (balitche/good wood) (Toineeta, 1970).
Some medicinal plants, such as juniper, rosebush roots, American elm and sage (*iisachchaxuuwe/bunched stems*) were used to stop bleeding or hemorrhages. Yarrow (*chihpachiiskisshe/prairie dog tail*), echinacea, and the bark of young willows were used in the treatment of toothaches (Snell, 1998). The yarrow plant, chokecherry bark, yellow currant (*bicheechihtashiile*) bark, kinnikinnick (*oopiishiia/mixed with tobacco*), puff balls (*iiwaaishialeete/used to make blind*) and lichen (*baaiishiile/yellow furred one*) were used to treat open sores (Toineeta, 1970).

The treatment of other ailments or uses of plants varied. Sagewort (*cheetisbaailichitche/wolf’s perfume*) was used for an eyewash and to treat for snow blindness, as were the lichen and willow bark. Joint weed was used for relieving pain in the bladder and prostate area and the snakeweed for kidney infection (Toineeta, 1970).

The yucca plant (*uuxisbatshuakshe/imitation deer awl*) was used for cleansing purposes. It was used for a shampoo and in washing hides for tanning. Using the yucca for a shampoo made the hair of individuals thick (Bear Don’t Walk, 1998). Sweet sage (*iisahchixuuwiilichitche*) was used as incense, as a body deodorant, and as a foot powder. The bark of the red dogwood or red willow (*biliichhisshe*) was
chipped and smoked, and the berries were used as additives for fertilizing tobacco seed planting. Fragrant yellow blossoms were used to line baby cradles and a sachet of these blossoms were used as a fragrance for the hair, body and clothing (Bear Don’t Walk, 1998).

Other plants that have been forgotten have been known to serve as pain killers or to be used for medicinal purposes. One has been described as a long/tall grass used as a pain killer when mixed with tobacco (Bull Tail, 1998). Another plant that is reddish in color and had a pleasant smell is no longer found in the area. Apsaalooke used to pick the leaves when the plant was in blossom and boil it into a broth. This drink would help cure sick people (Smart Enemy, 1998). Another personal experience related by an elder:

At the spot on my head where the pus was, he cut, he tied a knot on a sinew, then he put it in there, then he pulled on this sinew until he pulled it all out, and it healed. That sinew was used to draw pus in the cut, doctors do that today with gauze pads. They use probably, buffalo fat to draw infections. They place the fat on the infected area, the pus is drawn out that way. (Bear Don’t Walk, 1998)

Certain members of the Crow people have rights to administer aid to ailing members. Rights in the historical context of the Apsaalooke people would be similar to today’s modern certification for a physician to administer medical aid to a patient. People obtain these rights by gaining
knowledge of specific practices. These rights are earned by proving their knowledge in actual use. Some rights are purchased from another person who has the right, but the purchaser must first be taught by the owner before the owner can pass on the rights. Another way of obtaining a right is by fasting and seeing in a vision a particular practice or method to aid in the healing of a certain type of ailment.

There are stories of mid-wives who helped women with labor pains. These individuals had the right to use "what the buffalo don't eat" or snakeweed to abort babies when women had pregnancy problems. They boiled a plant to make tea, and women who were having labor problems drank it (Comes Up-Not Afraid, 1998; Snell, 1998; Deborah Yarlott, 1998). Sometimes a large animal bone was used to rub the pregnant woman's stomach to abort the baby (Bear Don't Walk, 1998; Deborah Yarlott, 1998). "There are lots of different kinds of plants that are used to help women through their pregnancy, but I have forgotten most of them" (Bull Tail, 1998).

**Mineral Uses**

Some minerals were also used in the treatment of certain ailments. Specifically, a white clay called uuwe,
found in the Wolf Mountains, was used for the doctoring of diarrhea (Bull Tail, 1998; Onion, 1998; Stone, 1998). “They cure things with Mother Earth. There are a lot of things we can help ourselves with; the elders know them” (Rides Horse-Smells, 1998).

We are from this earth, made with mud. The soil with all the minerals are part of us; mineral potassium, calcium and other minerals. They used it for keeping the body in good health. The body knows what it needs, minerals from the earth. (Bull Tail, 1998)

Grant Bull Tail (1998) shared a personal experience from his childhood:

At one time “Plain Feather,” I had a stomach problem. There are different kinds of clay, but I’m referring to white clay, he had some in a bundle. He mixed it in water and gave it to me, it taste like dehydrated milk, it cured my stomach problem. They know where all this dirt come from or where to look for them, since we are made from minerals, they use minerals. When we are lacking we become ill from it, they know that. They use it to heal, “Sweet dirt,” they are found in edge of gullies. They have a sweet smell, smell like perfume, they’re used for medicine. They are like aspirins, they’re used as pain killers and will cure pain, right away, people carry it around. I have some that my mother gave me. I have just a little bit left. I don’t know where they got them. I think they’re from some certain kinds of flower that was composed, build up or maybe the dirt is just sweet smelling, they are powdery, a grayish color, they use it quite a bit. (Bull Tail, 1998)

Water Sources

Water was and still is one of the most respected natural elements in the Apsaalooke environment. It was not
a thing that Apsaalooke people played around with. Horse play was not permitted around water. It is said that when water is sprayed at each other in play, it will rain.

Certain individuals had rights in dealing with water, rivers, and springs. It is a belief that waterways are sacred. Before crossing any rivers, Apsaalooke would offer food to the river. In the mornings they would smoke and pray on the banks of the river (Bull Tail, 1998).

There is a story told in the Apsaalooke oral history about how the ritual of feeding the river came about. A version of that story is as follows:

When they went to battle toward Canada, somewhere over there, three of those that went to battle, it stood in their path. *Bimmuumaakoolu* (water creature), you know, a large one would not let them pass. They couldn’t move it, they built a fire, they burned it and ran away. They hadn’t eaten in a long time, where it was burned smell good, must be like broiling meat, it smelled good to them, they were so hungry. Their leader, told the young ones not to eat it. One of them was so hungry, cut a slice off and ate it. The next day, the creature, because it got burned left. The one that ate, he turned into a *baapuxhuchke* (long insect). After this happened, this young man said I will stay here now. Those that go to battle near there or those that pass through there, meat, throw in fresh meat, they feed him each time they go through. (Deborah Yarlott, 1998)

One elder mentioned that she teaches her grandchildren these rituals. Anytime they are near water, they are to feed the water, the water creatures. She tells them to also feed the fire especially when they go to fight wildland
fires. She mentioned that fire is dangerous, as is the water. Her instructions to her grandchildren are to pray while feeding the fire and the water. In everything they do, they must pray (Smart Enemy, 1998).

Water was also used in treating sick people. There are different types of water; some are warm and mineralized like the hot springs found around Yellowstone Park. This special hot water is used for treating the sick people, by soaking or bathing in it. Sometimes these waters would be given to the sick to drink (Bull Tail, 1998).

**Faith in the Creator’s Substances**

One phenomenon was experienced by an elder who had been told of a treatment for warts. She connected her experience to faith in the Creator:

With the first thunder of the spring, run outside and get some green grass and spit on it and put it over, ah, your wart, rub it on your warts. They will go away in a day or two. You know, it happened. I suppose it is an act of faith. It is probably from some energy put into the grass from the thunder. Maybe it was electricity from the thunder and lightning. I had a lot of warts, one, two, three, four, down my little finger, on to my wrist, all lined up. When I went away to a boarding school I always wanted to clean up really good, so my boyfriends will not see the dirty warts, especially the boyfriends. I used to scrub them to get them really white, so they wouldn’t laugh at me. Just before we returned home from school, we were all kind of anxious, then there was a storm. We were looking out the living room window and then there was a big thunder and lightning... oh wow... then I remembered what grandma had said. I ran outside and I took some
of that green grass, and spit on it. I rubbed that grass all over my warts and they were all green looking. In a day or two, I went to wash them just like I used to and they were gone, absolutely gone, didn’t leave a mark, never got them back, first thunder of spring, in your area, run out there, you can do it, let them do themselves, spit is so controversial now. We have lost faith in some of the Creator’s substances that he has given us to heal with. (Snell, 1998)

Alma Snell may just as well have been speaking of the key ingredient in the healing process of any ailment. All the treatments may have some substance and aid in the healing process, but an important aspect to recovery is in the faith in the Creator’s substances.

Building Materials

This lodge, inside, make it neat/clean, do not let things scatter. The floor should be clean and neat, make the inside of your house neat, this way you will be people, your kids will have something to eat, you will have belongings. Your lodge will be good, take care of your lodge. Your lodge is like your mother. (Bull Tail, 1998)

When Apsaalooke people lived in the Great Lakes Region, they resided in dome-shaped lodges made out of willows or similar trees. They were constructed much in the same way as the Sweat Lodge is constructed today. In many cases, a spot would be chosen where willow trees were growing to construct the lodge. Trees would be selected to be the perimeter of the lodge. These would be left standing, and those within this perimeter would be chopped down. The tops of these trees would be pulled down into the center and tied
together. This would present a circular, dome-shaped appearance to the lodge. The willow trees that were cut and other trees as needed would be interwoven through the tied-down trees to close open gaps. These lodges were built large enough to house families, and this became a home for extended periods of time. When the Apsaalooke moved out into the Plains, they utilized these lodges on occasions (Bear Cloud, 1998; Onion, 1998; Stone, 1998).

As the Apsaalooke moved into the Plains region and began to follow the buffalo, their homes changed from lodges constructed with willows to ones constructed with lodge pole pine trees and buffalo hides.

They used buffalo hides for lodges (Comes Up-Not Afraid, 1998). The buffalo hides would be prepared following a tanning process. A mixture of animal brains and the yellowish part on the tip of a sage was soaked into the hide. The mixture had an unpleasant smell. They let the hide soak. The hides would be stretched, dried out, scraped, pounded, twisted, smoothed and tanned. They sewed the buffalo hides together to form cone-shaped tepees. "In the past, for large lodges, they used two times ten, that is twenty, that is what I heard" (Smart Enemy, 1998). Tepee poles made from lodge pole pine trees were used to erect the lodges. The poles used must have been short back then; now the trees that are cut down are longer (Onion, 1998). They
used stones for holding tepees down, not stakes. People today still find tepee rings in places frequented by the Apsaalooke people (Bear Cloud, 1998).

Materials Used to Make Tools

Many of nature’s resources were converted into tools, utensils, and weapons. The uses varied whether they were made from pieces of plants, animal parts or from mineral earth products. Many natural resources served multiple functions. It took creativity, imagination, sensitivity, knowledge and intelligence to find those uses. In every use of a natural resource, appreciation for its usefulness was shown in prayer and acknowledgment. An example is given by Grant Bull Tail (1998):

When they find something, they are instructed to take what they need and leave the rest, on later days there will be some more, just get what you need, not anymore. Plants they use, animals, buffalo, in the past, when they use some thing, everything, they place it back into the ground, “We used it the right way, I have used it. Mother Earth I give it back to you.” They replace it back into the ground, they do this in areas where people do not frequent, sometimes they put plants into the river/water.

Wood and animal parts were used for bows. New grown ash trees were used because they do not break easily and when they first grow, they are slender and tall. Biiluubua (chokecherry) were used at times, but they split. Elk antlers and bighorn ram horns have been used for bows.
They must be hard to make. They boil the antlers; they are scraped and chipped away at; it takes a long time for elk antler bows. Bighorn Ram horns, they use them too. They must have had large horns. They boil them until they are soft. They scraped them and stretched them. When they are done, when they shoot at buffalo, it goes through them. These bows weren't very long, they were short. Today's bows, the fiberglass ones are hard to pull. These ram horn bows were easier to pull, the arrows go a long ways. They are not awkward like the artificial ones. (Bull Tail, 1998)

In the making of arrows, mostly they used biiluubua (chokecherry). A plant called iiwella, which is rare today, and baleiichia (dogwood) which cannot be found anymore, were also used for arrow shafts. The arrows are made in a certain way; the tip was made with chokecherry wood. Round tipped arrows were used as practice arrows. When stone arrow heads were used, they tied the arrow heads to the shaft with hair from buffalo. They twisted them around the stone arrow head and shaft (Bull Tail, 1998). Sinew has also been used to tie arrow heads to the shaft (Rides Horse-Smells, 1998; Stone, 1998). Feathers and plumes from an eagle (duuptakoische/hands on both ends) were tied or glued on to the end of the shaft for accurate flights. The glue was made from boiling buffalo gristle until it turned thick. This substance was used for glueing, especially the glueing of feathers to the arrows (Bull Tail, 1998).
Elders described the different types of tools that were utilized. Harold Stone (1998) spoke of what arrowheads were made of:

They used to get flint to make arrowheads. There were people who knew how to do these. My grandmother she told me, but I forgot what they are called.

Clara Rides Horse-Smells (1998) told a story of Apsaalooke people using poison:

In the making of spears, poison from a rattlesnake and a plant found in the hills with a yellow center, I think it's called yellow berry, would be mixed together and applied to the tip. The poison stops them, even if it is just a scratch. Not too many survive from it.

Walter Onion (1998) gave an explanation of the different ways clay could be used:

Arrowheads, the shaft, how they are marked, clay, clay that is what they use, they use uuwe, awaxuuwe some are blue, yellow, white, uuwe, uuwe. Uuwe are red, uuwe are white, uuwe, the white ones, they use it to whiten moccasins.

One elder talked of sharpening knives:

You say knives, how you sharpen them is with rocks, it is a rock that is round and long, when they sharpen knives with it, it makes it really sharp. I know that. (Smart Enemy, 1998)

Harold Stone (1998) gave an explanation on how stones were used in the making of pipes:

Tool, pipe, they smoke, pray with it, they use a rock, what is its name. There is some here, there is a reason for using these, it's not for general purposes, they take the pipe and they smoke to the
four winds. They puff on it a couple of times and put it in the center then they have discussions, there are those that have the right.

Stone (1998) also discussed other tools that were vital for survival:

Tools, bows, arrows and knives were survival tools. These were their tools, and this was how they remained people (living). They hunted, killed buffalo, they protect themselves with these tools. The knives were used to skin with. They use these tools to have things. It’s like the military, they give you these weapons and tell you, ‘this is how you will stay people, don’t leave it behind, wherever you go carry it.’ It was like that. They feed their wife, their children, they kill buffalo, they go to war, they come back. It is how they are people. (Stone, 1998)

Clothing

As mentioned before, the buffalo was vital in many ways for the Apsaalooke people as it was for other Plains tribes. Different parts of the buffalo were used for many things. Moccasins were made with certain parts of the buffalo hide, at certain times of the year. The breast part of the buffalo was used for the foot part of the moccasin. The leggings were made from the soft parts of the hide, and the sole of the moccasin from the toughest part of the hide. They did not use other parts of the hide when they made moccasins. The beard of the buffalo was used for rope. The beard would be braided to about 20 to 30 feet. There is a part of the body that was used for sinew, and this was
boiled. In the boiled stage, they were like glue. Every part of the buffalo was used, nothing was wasted; even the tail was used as a switch to keep insects away. Even the buffalo bull’s testicles were used for rattles in the tobacco dance (Bull Tail, 1998).

Clothing was made from buffalo hide and other big game hides. Their clothing was neatly sewn together; each family created their own designs and Crow designs were considered the prettiest or most attractive among Indians. They were artists; their designs were individualized. Porcupine quills were used for ornaments. Dyes were used from different types of stone, and some plants were used. Plants, like the dandelion, were used for the color yellow, and some insects or worms that had color were also used (Bull Tail, 1998).

Bowls were made from soapstones and wood (Bull Tail, 1998). Other dishes were made from buffalo horns and hooves (Bear Cloud, 1998; Stone, 1998). In the summer time, they would also use leaves for dishes (Bull Tail, 1998). Alma Snell (1998) shared a story about her Grandmother, Pretty Shield. “She would touch a box elder tree with a burr on it. This would make a good dish. The burr would be cut out and the inside of the wood would be burned out, scraped out, more hot coals put in it and some more burned out. The burned area would be dug out and sanded. The bowl would
purify itself in the sun and wind. That is why those people were healthy, because they use the natural things, God don't make mistakes” (Snell, 1998).

Personal Hygiene

The Apsaalooke were very concerned about being sanitary. They watched what they ate; they did not use dirty tools. They knew if their food was tainted, they would get sick. Each individual carried their own cups made out of wood. They did not use anybody else’s cups, and each individual carried their own food (Bull Tail, 1998).

Every day they cleaned themselves. Whether it was cold or hot, they bathed each day. During the winter, even when it was really cold, they would go to the river, break the ice, and would bathe in the cold water (Bear Don’t Walk, 1998). Each day they washed their long hair and combed it out. They would use natural perfumes and brush their teeth with young willow and cottonwood trees. They used the buds for brushing their teeth. They would also clean their everyday clothes by pounding them against rocks and water, then scraping, drying and greasing them. Special occasion clothes were treated with care. The Apsaalooke people would adorn themselves neatly (Bull Tail, 1998).

They used different colored clays (uuke) to mark themselves and their belongings. These colors and designs
were used for identification purposes at times: yellow (awaxuuwe), white (uukchia), red (uuwe) and sometimes blue (biashuua) (L. Plain Bull, 1997; Onion, 1998; Stone, 1998).

The buffalo was not the only animal that was used. The eagle was also used for a variety of things. Bones from the wings were made into whistles. They would put holes in the bones to use as whistles. Some individuals were very good at making them. They would use eagle feathers for making their arrows and tail feathers for dancing. The eagle also was used as a symbol of an individual's medicine. The eagle symbolizes strength or greatness (Onion, 1998; Smart Enemy, 1998; Stone, 1998).

Use of Fire

Often in the winter, when the Apsaalooke were ready to move, they would dig a hole in the ground and put hot embers in a container which was placed in the hole. A mark would be made where the place could be found on their return. On the return to these camps, they then would locate these hot coals and start fires with them (Onion, 1998; Stone, 1998). In those days that had no matches. They used to hit rocks together to start fires (Bear Don't Walk, 1998). Rocks were used for other things also. During the winter, rocks would be warmed near the fire. With the warm rocks, they would
wrap the children within blankets. Children would stay warm that way during the winter (Stone, 1998).

**Transportation**

In the beginning, when the Apsaalooke moved from camp to camp, they traveled by foot and used dogs for packing (Bear Cloud, 1998; Comes Up-Not Afraid, 1998). Packs were made from hides and placed on large dogs. In the past they packed their belongings on their backs, which was done mostly by women (Onion, 1998). At some point the Apsaalooke obtained horses from other tribes from further south. After obtaining them, horses became one of the things Apsaalooke held in great value (Bear Don’t Walk, 1998; Stone, 1998).

**Games**

The life of the Apsaalooke was not all struggle for survival and constant movement. On occasion they enjoyed competition. They had a game of hitting a ball. A piece of hide with deer teeth sewn inside was used. Competing on a flat piece of ground, they would choose sides and play each other. The objective was to put the ball through two poles used as goals on each end of the field, which counted as a score. Opponents tried to keep the ball away from each other, and the team that scored the most goals won. The game is much the same as today’s games (Good Luck, 1998; Stewart, 1998).
The Apsaalooke people depended on many of nature’s resources for knowing and understanding the environment. This knowledge came about by them being in tune with Mother Earth and all its inhabitants. Care and respect was given to those that contributed to their well-being (Bull Tail, 1998).

“They used to communicate with animals.” The Apsaalooke used to know what the coyotes would say (Bull Tail, 1998). Owls were signs of bad luck. When an owl hoots near a lodge, it is believed to bring bad luck. When they hoot in a rapid beat and disappear, that too is bad luck. Screech owls are the ones they consider bearers of bad luck; they bother people. Screech owls can bark like dogs, meow like cats, sound like laughter or even sound like children crying. They holler kind of weird. (Onion, 1998)

The insect would also be watched; they were used for signs to find healthy plants (Bull Tail, 1998).

The Apsaalooke looked to the sky for signs of how the weather would turn out in the near future. This form of prediction still takes place today. Bilitaachiia, the moon, referred to as kalexaalia or grandmother, and axxaashe, the sun, called isaahkaxaalia or grandfather, were and are still utilized for weather information. Three elders told their
versions of how the moon and the sun were used for information:

They know things from the moon. When it is facing up (Crescent), it is resting. They used to say, it will be a good day they used to say, when it is facing down, they say it is warming its back, it will be a bad day (stormy). Another way of knowing things is stars. There is a star that shines bright, when it is close to the moon, there is something bad that’s going to happen, they say, they know things with that, there might be a death. They say that, from what I know... (Onion, 1998)

Harold Stone’s (1998) version follows:

Moon, (hand gestures), crescent moon, (right side up), it is going to be a good day, (hand gesture), if it is like this (upside down), it is pouring, on the ground, ground, it is, that day it is raining or snowing. The stars they use to travel. Where the sun rises, where the sun sets, they know how the day is going to turn out, sun setting, when it is reddish, tomorrow it is going to be good, around it is a ring, it is going to be cold. The moon also, the stars how it gets up, that is how they know.

The following is Elizabeth Smart Enemy’s (1998) version:

Moon, ah, when it faces the sun, they say there is going to be clouds, winter, when the moon has a ring that is whitish, kind of like it is white around it, there is going to be clouds. When the crescent is upside down, it is warming its back, when it is right side up, it is holding water. They were really smart, the sun when it faces it, it is great. The ones that know clouds, iispilooxxe, they know clouds, the sun, moon, when where the sun rises is reddish and where the sun goes down, it is going to be a good winter they use to say, good winter they say. People know things from these, they were great, smart people.
The three different versions are very similar to the explanation my father, David Yarlott, Sr. gave me while I was growing up on the Crow Indian reservation. During the course of the day, he would watch the sun, the clouds' movements and patterns, and the moon and tell us how the day would turn out. My father's predictions on weather patterns were usually more accurate than the weather man on the broadcast networks.

Most of the elders are in agreement about changes happening with all things. They say that the weather patterns are no different. Francis Stewart (1998) noted some of the changes that have occurred during his lifetime (personal translated communication).

Nowadays, you have thunder, it used to have a different sound, it's a rolling sound. Lightning is different too, lightning used to strike straight into the ground, now it goes in the air. Everything has changed. It is different, everything is different today, it is getting dangerous, winter is getting colder, it is harder to stand, summer, things do not grow at times, there is a change. (Stewart, 1998)

There are various other signs and symbols recognized by the Apsaalooke people. The directions of the wind have significance as do numbers. The east is the beginning of new things and is symbolized with the opening of a lodge facing the morning sun. The south is associated with warmth and the growing season. The west is associated with the mountain side and the setting sun. This is where the storms
and lightning come from. The north symbolizes the winter. The numbers four, seven, and ten hold a lot of significance in the lives of the Apsaalooke people. The belief is that everything comes in fours. The four directions of winds and the four seasons are examples. The number seven is sacred in stories related to the seven heavenly brothers or the seven sacred rams (Big Dipper) and the seven entities of life: the air, water, animals, plants, atmosphere, fire and earth. The number ten's sacredness is in its completeness. The number ten makes reference to the fact that the birthing of a child takes ten lunar months (Randy Pretty On Top, personal translated communication, 1998).

Even with the importance of numbers, there is one restriction in the use of numbers in the Apsaalooke customs. The Apsaalooke do not count family members. It is said that if they are counted before going to battle, the last one counted will not return from battle. When families count themselves, they all die off (Bull Tail, 1998).

Respect for People

A resource considered natural in the Apsaalooke way of life is the human resource. Joe Bear Cloud (1998) mentioned that, “Human Resource is a natural resource, that is why we are people” (personal translated communication). The ones that are respected the most are the Clan Elders, “We respect
our elders, those are the ones we respect, even if they are not very good, we respect them, teasing clan members, we can do nothing about them" (Smart Enemy, 1998). Larry Plain Bull (1997) gave this advice in dealing with the elders of one's clan: "Have good character, watch what you say, approach them in a good way" (personal translated communication, 1997).

In reference to respecting Clan Elders, Larry Plain Bull, Sr. (1997) said, "Feed them, give them a little something. *Ibibdasdushecucuh*, it means to touch the heart" (personal translated communication). This statement is in reference to providing a gift to a clan elder. A Clan Elder is an individual who is older within the same clan. Clan elders are responsible for the guidance, prayers, and discipline of the clan child. In touching the elder's heart, they wish only the good things for the giver of the gift. The respect for clan elders is further shown in the following statements:

In the past we are not allowed to pass in front of a Clan Uncle, even when they are smoking. They could be praying. We are told to lean on the Clan Elders with our problems, ask them for prayers. They use to do it a lot and that is why they respect it. (Plain Bull, 1997)

In approaching an elder for guidance,

Have good character, watch what you say, and approach them in a good way, that is our way. Today we do not know these things, my grand-kids
do not know this. We need to pass it along; it is disappearing. (Plain Bull, 1997)

Grant Bull Tail (1998) had this to say about the human element: "There are different kinds of people, unique people, there is nothing else to do but to be creative to survive" (personal translated communication). "Those with medicine were held in high regard. They used these medicines to know what was going on. That is how they help themselves" (Bear Don’t Walk, 1998).

Even though the human life was held as an important resource, elders cautioned against having too many children. One elder’s recollection of what he heard from an ancestor was, "Women, do not have too many kids." He said:

This is what I am telling you, if you have one child, your life will be good, you will be wealthy. If you have two children, you will have it rough. If you carry your child, your other (spouse), if you carry your belongings it will be hard if you have two children. If you have three then it would be hard, four, you will be poor. Do not have more than two children. (Bull Tail, 1998)

The following statement seems contradictory to Mr. Bull Tail’s comments. Human resource was seen as a source of wealth.

Wealth can be seen as knowledge and how they pass it on to others. Another is in how many relatives you have. It is in having kind words for others, having respect, concern, love, the number of people who come to see you. (Bear Don’t Walk, 1998)
If an Apsaalooke had too many children, this was a source of concern for elders. On the other hand, the thought of having many relatives was seen as being well off. The harsh times in the past dictated circumstances. Having many relatives or many visitors coming indicated that an Apsaalooke was well-respected and had good fortune. When a person grew older, many friends and relatives were a welcomed situation because there would be more people to support the basic needs of survival.

Traditions

The Earth, the Creator had given us, whatever we do, nature, that’s how we are people. Today, Indians are more spiritual. How we are raised since we were young, how we were disciplined/taught/told stories, respect the medicine bundle, don’t go near it, take care and respect your elders. Listen to what they are teaching you. If an elder tells you something, do not respond back negatively, that is how we are disciplined. Those are things we are told, these medicines are how we are healed, it’s fearful, it’s strong. We hold on to these things we are told, until we are older, we held that as truth. Just like the Sweat Lodge, Sweat Lodge is considered Sacred, we accepted it as truth. Older people have medicine, we believed them. What we believe, that’s where we stand. At some point we believed in God’s son, we turned to God, they can’t move us. Apsaalooke, they care and love each other and its always been like that. They accept each other as their own, it’s always been like that, they feed each other, when you enter a lodge, they greet you and set you down to coffee, that’s Apsaalooke way. If your character is no good, your road would be overgrown with weeds, people will not visit you, it will be visible. On the other hand, if you have good character, a good person, and are good to people and help people,
your road will be wide and clear. That’s what my grandfather taught me. (Stone, 1998)

Fasting was something the Apsaalooke people did all the time. These were men who were virtuous and ones that people listened to. They were usually older men who were respected. In traveling, these older men would go out and fast to determine which route to take. Once they got over the fasting period, they would instruct the leaders on which routes to travel. “The Apsaalooke were ones that fasted a lot” (Stone, 1998). Fasting and prayer were vital parts of their survival. They fasted to seek visions, to seek assistance from higher powers. In these visions, helpers might include visions of people, animals, supernatural beings, or representations of any earthly being (e.g., atmosphere, sun, stars, and plants). These helpers (medicine bundles) aided in healing processes, in guidance, and in providing basic needs for survival (Bear Cloud, 1998; Bear Don’t Walk, 1998).

Tobacco Ceremony

A tradition that is still continued is the Tobacco Society adoption ceremony. This ceremony involves the iichichia or tobacco. Iichichia is the sacred tobacco of the Apsaalooke. This tobacco, because of its importance to the Apsaalooke, is not smoked (Plain Bull, 1997).
The Tobacco Society is a religion. Members of the Tobacco Society gather for purposes of healing, honoring, recruitment and adoption. The Tobacco Society extended from the vision of No Vitals. In the vision he saw a location where he was to plant this sacred tobacco seed. No Vitals and his people traveled great distances in search of this location. He would know the right place to locate his people if he planted a tobacco seed and it sprouted. He found the location at the base of the Big Horn Mountains near present day Sheridan, Wyoming (Deborah Yarlott, 1998).

Sweat Lodge

On this earth, people were given things, they were given things spiritually, things to protect themselves. In the past, Old Testament talks about the use of medicine. Some were probably different, some bad, it is like that, this, medicine. That is how they were to help themselves. Use the Sweat to fend for yourself, Apsaalooke, it was given to us to help ourselves. When they go to battle, if some of their people get killed, they fast, bath, like that, help yourself with the Sweat Lodge. (Plain Bull, 1997)

The ritual of participation in the Sweat Lodge Ceremony is one of the few original traditions still practiced today. The Clan System, language, Tobacco Society and the Sweat Lodge are traditions that have endured the many attempts to extinguish these aspects of Crow culture. Other traditions have been adopted from other tribes, and some are being revived by tribal elders.
The Sweat Lodge is used to remind us of things on this earth and the winds, with the air we are people, the earth there are things, fire, water. These four things are why we are people, we use rocks, fire, water, air all of those for Sweat. Sweat out and take out the poison out of the body, they bathe for sanitary reasons, the heat cures in the Sweat. Crows are clean. (Bull Tail, 1998)

Nobody really knows where the Sweat Lodge came from. There are speculations about the origination of the Sweat Lodge, but not a definite source for its beginning. There has been a lot of discussion about this matter among elders, but an agreement could not be reached (Bear Cloud, 1998). A couple of responses are recorded from the personal translated communications:

Sweat Lodge, we don't know where it came from. We use it a lot, nobody said, it is yours, use it, where it came from we don't know. They have dreams, they use it for medicine, wherever it comes from. (Stewart, 1998)

We didn't hear of any Sweats, later, White On The Ground, had a dream and saw a Sweat Lodge. They used it for helping each other. If you use it for prayer, you will be a person for a long time, it was said. That is what I know. The Sweat we use. (Bull Tail, 1998)

Selection of Materials

The Sweat Lodge is constructed in a variety of ways. The finished products are usually all dome-shaped, but the way it is constructed depends on the person who has the right to construct the lodge. Flexible, slender trees are used for the frame. The number varies from twelve,
fourteen, sixteen, to some with up to a hundred trees (Plain Bull, 1997). Red willows and diamond willows are the ones used mostly (Joe Blaine, personal translated communication, 1998). There are four main poles, called Iichia; two in the back, two in the front. The four main poles are bigger and are the chiefs. “They are the ones to hold us.” They are placed on each side of the entrance: The east side (the main entrance) and the west side (the back door) (Plain Bull, 1997).

Hides (in contemporary days blankets, rugs, or canvas tarps) are placed on top of the framework. This is to keep the steam from the rocks inside the Sweat Lodge. Apsaalooke used a plant like a pine that grows low to the ground from the mountain as a ground sheet inside the Sweat Lodge. They also used cattails and hides for ground sheets in the past (Bear Cloud, 1998).

\textbf{Process of the Sweat Lodge}

In a Sweat Ceremony, incense in the form of flat cedar, sweet grass, sage, and bear root is used for smudging (Plain Bull, 1997; Bear Don’t Walk, 1998; Rides Horse-Smells, 1998; Stone, 1998). Tall grasses are collected and tied in a bundle to use as a sweat bath switch. Grass collected from sloughs and sedges are also used for these purposes. Tall
sweet sage and small chokecherry branches in season are also used (Bear Don’t Walk, 1998; Pretty On Top, 1998).

The following statements were made by a couple of the elders about their understanding of the Sweat Lodge.

I have forgotten some things, this water, water, that is why we are people, this rock, when it is in the Sweat, inside, purification is what it is used for, things in our heart, all our bad characteristics, our sorrows, things that are not good in us, it is used to remove these. With the smudge, the rocks, ah, ah, past, first they use, rocks, they put in four. Four rocks they put in, summer, fall, winter, spring, on this earth, they mean the four seasons, the winds, there is four. If you want to do something, four is how the Apsaalooke do things. It is like that. There are different types, the one that I use is, things on this earth, things that bring us good luck, how it is hot, when we pray inside. If we ask for things in the Sweat, when we lift the door, our words go up with the steam, but it is different with each one. (Plain Bull, 1997)

The next statement regarded the respect and proper way of conducting a sweat:

They use Sweat Lodges to purify themselves, they pray, they treated it with respect, they do not go in front of sweat pourers. There are certain people who have that right, it is them that conduct it. They do not do it any old way, it heals also, they treat illnesses with it. There is a place for it, this sweat lodge, there is a way of putting them together, they do not do it just any old way. They pray over it, one that has the right of building a Sweat Lodge, they give them gifts, to build a Sweat, there are people who can do these. There are people who pour, in pouring, there is four, the winds, east, west, north and south, where the wind comes, they pour with that, seven days, that is what they pour with also, ten, it is the same, they raise [the flap] on four, seven, raise, ten when they raise, you
It has been mentioned that all sweats are not conducted the same. Each individual who has the rights to construct a lodge or pour water, conducts the ceremony in the way they were taught (Plain Bull, 1997; Bull Tail, 1998). I was fortunate to participate in part with one family's way.

**Family Ritual**

On July 10, 1998, I went to the Warren Joe Blaine residence along Lodge Grass Creek on the Crow Indian reservation in hopes to conduct an interview. By chance it so happened that the family was in the process of constructing a new Sweat Lodge that day. I was invited to stay and observe and also to participate if I so chose. Mr. Blaine gave me consent to ask questions at any point and to tape-record any communication transactions. This ceremony had a dual purpose. One was to pass on the knowledge of building the Lodge in the manner Mr. Blaine was taught. The other was to offer his pouring rights to his son, Benedict; son-in-law, Steve Chesarek; grandsons, James Blaine and Benedict Blaine, Jr.; and grand-son-in-law, Wendell Black Wolf. Mr. Blaine mentioned that it was getting harder in his elder years to practice this ritual, and it was time to pass it on to his family.
Mr. Blaine or Chiisabua, interpreted as something related to a battle, uses two clans. One is the Ties In The Bundle and the other is the Whistling Water Clan. He is also a child of the Greasy Mouth. The following narrative describes the ritual.

At daybreak, Wendell Wolf Black awoke before sunrise. He went to the exact place the new Sweat Lodge was to be erected. Wendell is the caretaker of a ranch owned by Warren Joe Blaine. He is married to Joe’s granddaughter, and lives in a trailer home next to Joe’s home. The ranch is on Lodge Grass Creek southwest of Lodge Grass. The construction of the new Sweat Lodge was on the banks of Lodge Grass Creek. Wendell stood at approximately where the center of the Lodge would be and awaited the rising of the sun over the morning horizon. He stuck a stick into the ground where he stood facing eastward to catch the exact spot the sun would break the horizon. When the sun broke the horizon, Wendell identified a spot on the ground approximately 20 feet in front of him, lined up between the spot he was standing and the rising sun. With a metal bar in his hand, he walked to the exact spot he had identified as lined up between the center of the Lodge and the rising sun. He stuck the metal bar into the ground. These two
spots would serve as marking points when the Sweat Lodge was erected later.

In the construction of the new Sweat Lodge, the involved parties cut fresh red willows and diamond willows. For this Lodge, 18 poles were cut. New Sweat rocks were gathered from the nearby hills. The rocks were sandstone that was abundant in the area. Oftentimes, volcanic rocks are used. The rocks are selected based on their durability and their resistance to explosion after they have been heated from fire until they are glowing red, and water has been splashed on them. The wood gathered for fire to heat the rocks is branches that have not touched the ground. They are wood from dead trees still standing. These elements required for the Sweat are pre-gathered before the start of construction.

When I arrived at the new Sweat Lodge site, Joe was sitting on a chair in the shade, instructing his grandson about material to have ready when the construction began. I announced myself and was greeted by Joe; his son Benedict Blaine, Sr.; son-in-law, Steve Chesarek; grandsons, Benedict, Jr. and James Blaine; grand-son-in-law, Wendell Wolf Black; and a number of younger grandchildren. I was invited to sit next to Joe in the shade. He explained the reason for building the new Sweat Lodge. He was growing older and was having increasing difficulty getting around
with each passing year. It was harder for him to participate in the Sweats that had been passed down to him by his father. He felt that it was time he passed it on to his sons and grandsons before it became too difficult for him.

The ritual would be in two parts; one was in the knowledge of how to construct the Sweat Lodge and the rituals involved, and the other was in the ritual of pouring water on the hot rocks. After demonstrating and explaining the process, it would be up to each individual whether they wanted to accept the "rights" to this knowledge or not. If they accepted it, they would offer Joe four gifts in exchange for the rights. The site was beautiful; a creek running alongside a hill covered with green grass, brush, and trees. Cattle and horses were grazing on the hillside across the creek, children were swimming and splashing water in the creek. I was greeted by family members and was offered a cold soda. There was evidence of how important this event was to the whole family. The happiness, sharing, contribution of labor and material, laughter, the young and old side by side; it was truly a family ritual.

Joe, from his vantage point in the shade, was directing and giving forth his knowledge of how the Sweat Lodge was to be constructed. As he was doing so, he gave explanations of
why it is done in those ways and how it had been passed down to him from his father.

The ground where the Sweat Lodge would be constructed was leveled and smoothed. This they did with the aid of shovels and loose dirt from the area. The ground was leveled as best as they could with the human eye. Loose dirt was spread into low areas and tamped with the foot. High areas were scraped with the shovel.

Joe had one of the boys stand behind the stick that was stuck in the ground, facing eastward. He instructed him to show the others where the two doorway poles would be. The doorway poles would be approximately 3 feet wide. From his vantage point, he identified the spot in line with the rising sun. Two others marked out spots a specified length away from the center point and one and one-half feet on each side of the eastward line. A spot that was to be the location of the fire pit was identified, also in line with the rising sun from the center point of the Lodge. With the location of the two doorway poles identified, a piece of rope was used to mark the distance from the center point. A tape measure was used to determine the distance. With the measured distance, all the hole locations would be measured the same distance from the center point.

The grandsons had stacked the firewood in an organized pile, with rocks placed on top for heating. At this point
the fire was lit to time the rocks’ heating with the completion of the Sweat Lodge.

One of the grandsons thrust a pointed iron bar about five feet in length into the ground at the identified pole locations. The bar’s pointed end was in the direction of the center point at an angle. All the holes would be angled, with the opening on top further away from the center point and the bottom of the hole closer to the center point. After 18 holes were made in the ground, the poles were erected in sequence in their respective spots.

The sturdiest, thickest, and longest poles were placed in the holes at the entrance way, which is the furthest east and at the rear door, the furthest west. The first pole was placed in the southeast hole, the second in the northeast hole, the third in the southwest, and the fourth in the northwest. These four corner poles support the Sweat Lodge. Before placing the poles in their respective holes, Joe greased the base of the poles with animal fat and spoke words of ritual to the wolf to protect his children and grandchildren, "Wolf come eat this fat, watch over my children and my grandchildren." He went through this ritual with each corner pole. The next sturdiest ones went in the holes in the south side and the north side. The smallest poles were placed directly next to the entrance poles. The remaining poles were placed in the holes from the smallest
to the largest going away from the entrance poles. After the four corner poles, the remaining poles were placed in their respective holes going from the front doorway and working clockwise. A rock pit was dug just inside the doorway entrance on the right side (northeast side). The dirt from the rock pit was placed outside the entrance, on the northeast side.

The four doorway poles were bent over directly across each other going east to west, first the southeast and the southwest poles together and then the northeast and the northwest poles. The poles were twisted and intertwined with each other and tied with a piece of cloth, so they would not unravel. At the center point, where the two poles were intertwined, the poles were measured four feet off the ground. The north side poles were next. The remaining poles were bent over to the north and south, beginning with the most easterly poles, next to the front doorway. The rest of the poles were also interwoven with the four main corner poles as they were bent and twisted with the pole across from them.

After the Lodge was constructed, a piece of fat was taken by Joe and the ritual of words was spoken again. "Wolf come eat this fat, watch over my children and grandchildren." The fat was placed in the dirt pile outside
the Sweat Lodge. Joe asked the wolf to come down and eat the fat and asked that the wolf protect the children again.

Then the participants covered the completed Lodge with canvas tarps and blankets. They left openings for the front and rear door entrances. Finally a ceremonial pipe was placed on top of the completed Lodge.

With the completion of the Sweat Lodge, all family members were asked to convene at the Lodge. Joe explained to them the procedure they would need to go through. Each youngster was required to enter through the back entrance, exit out the front entrance, and walk away toward the east, north of the fire pit. Joe asked for blessings and protection for these children as they passed through the Sweat Lodge. After each had gone through, Sweet Sage was placed about a foot apart in a semicircle starting from the rock pit and working away. The semicircle was replicated in four rows away from the rock pit until the whole floor inside the Sweat was covered. Blankets were placed inside the Lodge for the floor over the Sweet Sage, where the participants would be sitting. Other blankets were used for door flaps for both the front and rear entrance.

I was asked to put in the hot rocks and be the door keeper for the passage of ritual. I took the hot rocks from the fire pit to the rock pit with a pitchfork that was at the site for that purpose. Joe instructed each participant
to put blue jeans or blue pants on before entering the Lodge. When they all were inside the Lodge, I was asked to start putting in the rocks. One rock at a time was transported from the fire pit to the rock pit until four rocks were delivered. After the four rocks, any amount that could be carried was taken and placed in the rock pit until the pit was full.

Afterwards I was asked to retrieve the Pipe and present it to the pourer who was the elder Benedict. Benedict was instructed by Joe to light the pipe and honor the doorway first by blowing smoke to it four times and saying a prayer. He next honored the rock pit and followed with other rituals. Each individual smoked the pipe and said a few words of prayer. When the pipe ritual was completed, they handed me the pipe to be placed back on top of the Sweat Lodge.

At this point, they all removed their remaining clothing, and the clothing was handed out to me to be placed at their respective places. The doorways were let down to enclose the Lodge. They began the ritual of pouring water on the hot rocks to create steam inside the Lodge. They went through four rounds of pouring water over the rocks, opening the doorway after each round. The first round was the pouring of four measured quantities of water. The second was the pouring of seven, the third was the pouring
of ten, and the fourth was the pouring of an uncounted number of times, called the unlimited. After this last round, they came out to bathe in the creek or wash themselves off with water from a large container.

They concluded the Sweat Lodge ceremony by having a family feast at Joe's residence while the women made their way to the Sweat Lodge, so they could also participate in the Sweat Lodge ceremony. The Apsaalooke custom is for men and women to go in separately in most cases. The men usually go in first.

After the feast, I thanked the family for their invitation and their welcome to the ritual. I offered my four gifts to Mr. Blaine for the opportunity for this observation interview. The four gifts are in recognition of the sacredness of the number four in the Apsaalooke culture. The number four is in reference to the four seasons in a year and the four directions of the wind. Upon his acceptance of my gifts, I concluded my visit and returned home.

It has been Revealed

Every thing in the universe is watched because it gave signs of everything. Everyone has their own knowledge and expertise. Everyone is unique and has their own paths. There are certain people who know what comes from the earth, like minerals, geology. This is natural knowledge for them. Then there are some people with knowledge of
plants, all different type of plants and they are called Scientist. Articificers as the Greek call it. Green plants, all plants are different for instance the plants from Wyoming, Idaho and Canada are different and these articificers knew the different types of plants and where they grew. Sometimes in the dark, when it is so dark you can’t see where one is going, these articificers will get a plant, crush it in the hand, and smell the plant or pick up a rock and lick or bite off parts of the rock or soil to determine where their location is. They also determine how far it is to go to their destination and the accurate time they would reach their destiny. They are always accurate with their predictions, even in the dark. Signs, knowledge, that knowledge of the scientist are passed down through generations. One band usually only had one, just one of a kind, also one apprentice in their lifetime and the people will travel with them to learn of the sign and symbols of the scientist. These scientist also knew all the sign of the stars. From the stars the future weather is predicted, for an example, when the stars are a certain way, we will have a hot summer. They are sort of historians also. These people are the ones to know the history. These people, they are the ones to tell the people things, they know a lot. (Bull Tail, 1998)

One story about how the knowledge was passed on to the next generation and how information was passed back and forth was surprising.

Before there were writings, not with paper and a pen but with sticks, with figures to keep records, no one knows any of that anymore. They were great people in the past, they had dreams, with these dreams, they use it for living. (Bull Tail, 1998)

Bull Tail (1998) mentioned that he has seen these writings, but could not understand what the meanings were. He is not aware of anyone that does. His recollection of the stories is that there were certain people in the Apsaalooke tribe
that had knowledge of using writings or these signs to give forth information. At some point in history, small pox killed off a lot of Apsaalooke people. His understanding is that these people died of that illness (Bull Tail, 1998).

During an interview with 88 year-old Elizabeth Smart Enemy (1998), she made a statement that reflects how times have changed the learning process within the Apsaalooke culture. She said:

We’ve lost a lot, if they know the Biluuke (Apsaalooke) culture, they should tell their kids, it is how we will not lose these. If they are smart, they would not think they are the only ones that need to be smart and not tell their children these things, if not, the children will not know these things. (Smart Enemy, 1998)

Later on in the interview Smart Enemy stated:

We have to save these for these young ones. It’s not for us, it’s for them, the little ones don’t speak our language. We need to teach them. We don’t want to lose our language. (personal translated communication)

In those two statements, Mrs. Smart Enemy was explaining how the Apsaalooke have lost or are losing tangible and intangible cultural resources that have been a part of Crow history. Mrs. Smart Enemy (1998) went further to say:

I was raised by old folks. I was taught (disciplined) for those things, what we were taught, my grandfather, he was the one that taught me a lot of things. It is not like that anymore, we don’t know anymore. (personal translated communication)
In reference to how knowledge was passed on from generation to generation, it was said:

They used to tell stories when there was a gathering. Those interested would sit down and listen. They would pass on all their knowledge. (Bull Tail, 1998)

When one elder was asked how he learned about the uses of natural resources, his response was:

I learned it myself. A lot of this from listening to others and trying it myself. Information I got from Herbert Old Bear; he used to tell stories, I learned from that; they used to tell stories and that is how they gained knowledge. We never really thought about it. (Onion, 1998)

When Elizabeth Smart Enemy (1998) was asked how the Apsaalooke knew what to use and how it was to be used, she responded:

They knew it from way back, it continued, it was passed along, now, it’s like how you intend to pass this (information) along also. (Personal translated communication)

When the elders were questioned further on how the Apsaalooke knew all these things in the past, the elders would look at me kind of funny. The expression on their faces seemed to ask, “have you been listening.” They would patiently respond by saying, “With all things, they would fast. All they know came in a vision or they were told by a being in a vision.” This was the overwhelming response by most of the interviewees. The answer, they said, was in being in tune with the environment and animals. Apsaalooke
were a part of the environment and treated it with respect. Because Apsaalooke were good stewards of the Creator’s substances, the Creator saw to the needs of its people.

From all the interviews conducted with the Apsaalooke elders, a sense of why there is a need for interrelatedness of all elements within an environment was visualized. From the beginning of the study until its completion, the importance of natural resources in the survival of a people has been mentioned. It has also been mentioned that cultural resources have been a vital ingredient in molding a people into whom they have become. Knowledge was another area that was considered part of the natural process, and of course, without the people, the process ceases to exist.

When we think of natural resources today, we think of trees, animals, water, minerals, all things that we can see. The Apsaalooke people’s interpretation of natural resources gives us a broader scope. There are many different elements that make up the ecosystem. We the people of today’s society need to listen to what some of the elders have stated; maybe we need to have Faith in what the Creator has provided for us.

Following the suggestions of my advisors, I learned a lot about the Crow cultural norms and traditions, and was given a Crow name, which is translated into the English language as Outstanding Singer. All these experiences and
the information were new to me, even though I am a Crow Tribal member and was raised on the Crow Indian Reservation. This process is a continuance of adult learning in the modern Crow Indian environment.
CHAPTER 5
RECOMMENDATIONS

Summary of Study

Apsaalooke is the name the people call themselves, but mainstream people know them as the Crow Indians. This historical case study involved the oral literature of the Apsaalooke people and the practices of natural resource use by traditional elders. The Apsaalooke have maintained most of their traditions, values, culture and language, but are threatened by loss of these practices due to the invasion of mainstream culture.

This study sought information on how the Apsaalooke people historically utilized the natural environment. Previous studies have had limited content in the area of historical natural resource use by the Apsaalooke. Those studies have been conducted from the viewpoint of non-Apsaalooke people. Most of the past researches have not done justice to the viewpoints of the Apsaalooke people.

There are advantages as well as disadvantages in working with one’s own culture. The knowledge that you already have can form a basis for defining a more in-depth problem or topic to document; whereas, an outsider may need to take
years to become familiar enough with the culture to define a meaningful topic. (Guyette, 1983, p. 126)

Critics sometimes complain that research conducted by Native Americans on Native American culture is biased. However, this complaint is not raised in other situations. “If a research done on Native Americans by a Native American is suspect in the eyes of mainstream society, then all the research conducted about white people by white researchers must also be suspect” (Dr. Wayne Stein, Lecture notes, Academic Practicum for Minority Students, Montana State University-Bozeman, spring semester, 1995).

The purpose of this study was to describe how natural resources were an important part of the Apsaalooke way of life by obtaining information from Apsaalooke elders through personal translated communications on the following topics: Apsaalooke concepts related to natural resources, influences that determined which natural resources were termed valuable, and the ways the knowledge of the different natural resources was retained through the passage of time. The purpose was accomplished through historical storytelling and recollection of childhood experiences of Apsaalooke elders.

This information was collected with a great deal of respect and application of Apsaalooke traditions and culture. The Apsaalooke traditions that were recognized and
followed during the course of the study were in using Apsaalooke language in the interviews, in respecting and abiding by the Apsaalooke clan system, in seeking guidance from Greasy Mouth clan elders, and in observing and participating in the Sweat Lodge ceremony. A fourth tradition that is originally from Apsaalooke culture, the Tobacco Society, was not included in this research. Although it is mentioned briefly in the research, not enough information was obtained to formulate findings.

Also, a goal of this study was to capture the learning process of the Apsaalooke people. The intent of this goal was to provide a document that would be available to the Apsaalooke people for future use, for retention of information, and for preservation of a unique culture that is slowly being lost. With the document, the Apsaalooke and other people can find ways to teach the practices of natural resource uses to future generations.

This study investigated three areas regarding the historical uses of natural resources by the Apsaalooke people. The first category sought the Crow concepts related to natural resources. Different types of natural resources that were historically utilized were identified and the way they were used was also investigated.

The second area explored was in what influences determined the value of natural resources. Frequency of use
of particular plants, animals, or other natural resources was evaluated to determine their value. Another way of determining value was to analyze purposes for which the natural resources were used.

The third area of investigation was in how the knowledge of the different natural resources used was retained through time. The teachings, observations, practices, and other methods were evaluated.

**Historical Resources**

**Conclusions**

1. The types of natural resources utilized by the Apsaalooke people are from the mother earth, air, water, animals, plants, fire and human resources.

2. Some of the original natural resources used historically no longer exist in the local area.

3. The very existence of the Apsaalooke people was due mainly to the availability of natural resources.

4. Many of today’s practices regarding natural resources have been learned from Apsaalooke ancestors.

It is clear that the Apsaalooke people still maintain uses of many traditional natural resources. The first and foremost is the observance and utilization of human resources. Family relationships whether by blood lineage or
in the Ashammaliaxxia (Clan System) have strong influences on how daily living is conducted. Respect, caring, nurturing, discipline and teaching of each other have always been observed for the sake of harmony and survival.

Recommendations

The Apsaalooke people, as well as all societies, need to have a connection with their past, an understanding of their roots and a pride in their accomplishments. The culture of the Apsaalooke has very ancient roots, is rich in tradition, and has served as the basis for the formation of today’s practices.

At the same time, we must listen to the Apsaalooke of today and understand their needs and desires. These needs and desires can almost always be met in a manner compatible with ecologically sustainable land use and economic development. Today, it is necessary to assimilate and use this cultural heritage in the context of contemporary science and civilization, making it available to the Apsaalooke people and preserving it for the different people of the world.

The Apsaalooke people must identify all the different types of natural resources used and collect samples of those that can be preserved. With each individual sample, a written report of what the particular sample is and how it
was historically used can be recorded and archived. For those natural resources that cannot be preserved in some manner, pictures and documentation could also be recorded and archived for future use.

In the identifying of the natural resources, a study must be conducted to evaluate and quantify what historical natural resources are still in existence on the Crow Indian Reservation and surrounding areas. Once identified, the Crow Tribe of Indians must take steps to protect, preserve, and perpetuate these natural resources. Only in identifying the what, why, when, and how natural resources were used historically can today's generation begin to learn the unique nature of the Apsaalooke people.

**Only by Need**

**Conclusion**

1. All natural resources were considered necessities to the Apsaalooke way of life, and one that might be considered foremost in importance was human resource.

2. The Apsaalooke people only harvested what was required, whether it was minerals, animals, or plants, and frequency of uses depended on need and seasons of availability.

3. Words of thanks are given to the Creator each time a natural resource is taken for use, and in some cases a certain ritual is performed for the harvesting of specific natural resources.
4. The process of learning the value of natural resources was each individual Apsaalooke’s responsibility, although knowledge of natural resource use critical to survival, was reserved for those who were capable of ensuring the passage of knowledge to others.

In the uses of natural resources, the Apsaalooke people saw all things of creation as valuable. All creatures of the air, water, and land were treated with equal respect. Other entities that were part of their living environment that contributed to the whole were the elements of air, water, fire, the cosmos, and Mother Earth. As in all things, the Apsaalooke respected these entities and strove to live in harmony with the environment.

Rituals connected to plants differed. Certain plants such as bitterroot and hawthorne were harvested after a ritual of giving thanks. The planting of the Tobacco seed is also conducted with a ritual.

Of all the animals, there was one particular animal that was utilized more than others. That animal was the buffalo. Most every part of the buffalo was used for something, either in consumption or in material use. Products of a buffalo killed included meat for food; hide for clothing, shelter, moccasins, parfleche bags, binding straps, and blankets; and a multitude of other minor uses. The bones were used for tools, weapons, and ornaments, and the marrow from inside the bones was eaten. Horns and hoofs
were made into cups or scooping utensils. Many of the organs such as the lung, heart, kidneys, liver, tongue and intestines were processed and eaten. Some of the stomach linings and other tubular casings were stuffed with meat. These tubular casings that resemble the sausage of today would be boiled until tender and then eaten. Some larger stomach linings were used to hold water. The hair of the buffalo would be combed out and collected. The collected hair was braided to make ropes. The tail was used for a switch. The penis of a buffalo bull (male) would be extracted and dried, then used for walking sticks. Sinew was used for sewing, and the brains for tanning purposes. As the evidence shows, the buffalo was a main component of survival for the Apsaalooke people.

There was a firm belief that only what was needed should be harvested. The belief was that to gather more than needed was a waste and would take away from the balance of nature. If another entity of life required a portion of a resource, then taking more than was needed would leave that entity without enough. The belief was that all occurrences of nature happen for a purpose and only in staying in tune with the environment would a person understand the meaning of the occurrence.

Frequency of use of natural resources depended on the availability of specific natural resources. Availability
was determined by the proximity of location in regards to the natural resource, the season in which the natural resource was available, time of day, types of weather that may have occurred that may impact the natural resource, and other factors of nature, such as fire, rain, cloud cover, and travel patterns. The most critical element was in the population of the Apsaalooke. Population size dictated many of the needs, as well as the percentages of the population according to age and gender.

The Cosmos was used for weather information, for predictions of what may occur in the days to come, for travel directions, and as a source of story telling. This natural resources use depended on clear skies. The use of air, water, fire, and some form of nutrition was a daily occurrence. Hunting animals and gathering plants was on an as-needed basis. The heaviest hunting occurred in the fall, but hunting also occurred throughout the year to replenish diminishing food supplies. Most plants were gathered when in blossom or when they were ripe for use.

Rituals performed for taking from Creation were an accepted part of the patterns that needed to be conducted. The ritual was accepted as a part of the living process, as was the consumption of food for energy. Events were not taken for granted; respect and acknowledgment was given to all elements living or dead. Words were spoken over animals
killed for food. A word of thanks to the buffalo may be something like, "I thank you buffalo for dying so my family can find nourishment from your body." With the harvesting or cutting down of a plant, spoken words would be similar to, "I have taken only what I need. I have left enough so you can replenish yourself that I may return again, if there is another need."

Recommendation

It is seldom possible and usually unwise to return to past ways of life. Yet we have learned it is almost always possible to take lessons from the past—for example, from the traditional cultural practices of the Apsaalooke people. Today's researchers, educators, scientists, and society as a whole might have ideas of how to develop new practices, but not all new practices are necessarily better than those replaced. Practices proven over the centuries may have particular strengths that become evident only in times of critical need, such as the Apsaalooke are facing today.

Preservation, protection, and perpetuation of these practices and remaining resources should be a priority, not only for the good of the Apsaalooke people, but for all societies. Different departments at Little Big Horn College, a two-year tribally controlled community college located in the heart of the Crow Indian Reservation, have
made efforts in gathering data to preserve information pertaining to natural resources. These efforts, although valiant, have not been enough. More needs to be done before the information and knowledge is lost. The practices must be documented, recorded, and preserved for future uses. Some of the traditions that are still practiced need to be observed and learned. Only by actually becoming part of the process of natural resource use will an adult learner gain the value of historical knowledge.

The needs of members of a society and culture change as a result of the changes that develop within the environment. In the circumstance of the environment of the Apsaalooke culture, there have been many changes that have been imposed through the development of the reservations and the contact with the Euro-American culture. As a consequence of these changes, the Apsaalooke people need to take steps to address these changing needs to maintain their culture in the context of their knowledge of natural resources.

One of the ways that Little Big Horn College can facilitate the retention of, and appreciation of, the historical knowledge of the natural resources of the Apsaalooke people, is to establish an Outdoor Institute for the Preservation and Perpetuation of Knowledge of Apsaalooke Natural Resources. Creating an adult education structure that is field-based and takes the learner into the outdoors
environment where the resources can be learned about in their natural setting would facilitate the continuation of knowledge. Moving it to the various outdoor locations would reacquaint the youth and adults with their heritage and reemphasize the traditional ways of gaining knowledge. Involving the elders in these activities as guides, facilitators, observers, or chaperones would recreate the intergenerational non-formal educational environment for all participants. The Outdoor Institute would also reassert the major tenets of adult education, namely relevancy (doing what makes sense), relationship (learning must be linked to learner needs), and responsibility (individual takes responsibility for their own learning) that have been a major part of Apsaalooke ways of learning.

Those areas that follow patterns such as observation of the cosmos could be studied in a classroom structure. Professor Tim McCleary of Little Big Horn College has already written a book, *The Stars Among Us*, a collection of stories from Crow Elders about the meanings of the different constellations. A study of other roles of the sun, moon, features of the clouds and stars should be conducted.

The holistic approach to the environment we live in needs to be retained. The role of the Apsaalooke elders as the givers of knowledge must be encouraged and enforced by
asking them to teach those of us who are still learning or wishing to learn the traditions.

**Passage of Knowledge**

**Conclusion**

1. Most knowledge was transferred through the use of storytelling by the Apsaalooke elders, which was a critical role to the cultural survival of the Apsaalooke people.

2. Some knowledge was obtained through observing others and adapting what was observed, and in other cases knowledge came through observation of patterns in the environment, such as insects, animals, plants, water, wind, cosmos and/or mother earth.

3. The most predominant method of gaining original first hand knowledge of natural resource use was through messages obtained from visions.

4. The role of the Apsaalooke elders in transferring knowledge to adults of important cultural activities and teaching the younger generation the Apsaalooke way of life is threatened by the influences of mainstream society.

5. The threat of loss of the Apsaalooke culture, traditions, beliefs, and language is impacting the traditional ways of learning and practice.

Learning, though viewed as needs based and as an individual responsibility among the Apsaalooke people, was also essential for the collective and cultural survival. People used the natural resources and associated them with particular needs, sites and locations. When particular
resources were the subject of storytelling, the storytelling reinforced the individual and collective memory used in the transmission of the knowledge among the Apsaalooke people. Participating in these practices was an individual choice activity.

In the passing of knowledge regarding the historical uses of natural resources, a willing learner was needed. The learner could be a child, young adult, or an adult. In most cases, responsible acts which were predominant in a survival environment required a mature person.

This person was responsible for carrying on the traditional practices until it was time to pass it onto another. In most cases this knowledge was passed on to a son or daughter, but it was not unusual to offer this knowledge to grandchildren, other relatives, or clan relatives. The methods learned by these individuals may be similar to other practicing adult learners, but the stories that are associated with the practice may have slight variations from family to family. These differences were due to the different perceptions or different observation points of particular events.

Knowledge obtained from trial and error is usually a result of trying or finding a resource that is foreign to the traditional uses. An example of a trial and error event would be something that occurred in a more recent time and
in a different place with the influx of Euro-Americans. Commodities were distributed to Indians on reservations. Women were taught to mix water with flour to make dough for bread. An Indian woman from the Fort Peck Indian Reservation accidentally dropped a piece of dough into a pan that was used to cook bacon. The dough turned into a golden brown round nugget. She retrieved this nugget and hid it in her apron pocket so the soldiers would not ridicule her for her accident. Later, alone, she sampled this product. When she found the taste to be pleasant, she made more and tested it on friends and family without informing them of its substance. The rest as we say is history. She accidently invented the fry bread that we eat today (Informant and year unknown).

A main source of obtaining knowledge of natural resource use was through visions, when an individual was fasting. These individuals usually were adults. There is a firm belief in a Creator who watches over the Apsaalooke and fulfills their every need. By abstaining from the intake of water and food, usually for four days, and by praying continually, the Apsaalooke people feel that the Creator honors the request made for guidance. In all things that require decisions, the Apsaalooke people fast and pray, and guidance usually comes in the form of dreams, visions, or spirits of some nature.
Recommendation

Reinforce, reestablish, and encourage the role of the Apsaalooke elders. Their role of storytelling and teaching of the Apsaalooke ways is needed for the preservation, protection and perpetuation of the Apsaalooke way of life. The elders must share their knowledge with their children, family members, and other Apsaalooke members. If other alternatives are needed, the Apsaalooke people must encourage the elders to provide this knowledge to other interested learners. In order to continue this tradition of oral history, the adult learners need to find time in their busy schedules of providing a living, to acknowledge the wisdom and knowledge of the elders. A part of the process of retaining the traditions is by listening to the stories. By sharing in the knowledge of natural resource use, nature could provide lessons. In this process the learning and passing of information continues.

Invite the elders to Little Big Horn College to have them present their knowledge to students in the classroom. The elders would be residential experts on historical natural resource use by the Apsaalooke people. In the classroom setting, the presentation of knowledge must be video recorded and preserved. A recorded presentation could be viewed and listened to over and over again, preserved for
the future. Not only will this preserve critical historical information that is slowly being lost, it will also give the elders a sense of self-worth.

With the presence of modern technology, the elders' role of nurturing, guiding, and disciplining has diminished. The seeking of information that the elders have heard through stories from their ancestors will give the elders an opportunity to fulfill traditional roles that have decreased from the pressures of earning a living in modern society and from the inclusion of modern technology.

Little Big Horn College must be the bridge between the elders and modern technology, by developing course work relevant to classroom teachings in the area of traditional natural resource uses. Investigate potential funding sources for individuals to pursue studies regarding Apsaalooke history, and use the funds for the purpose of researching, evaluating, developing and implementing a curriculum in the field of natural resource uses.

Apsaalooke people need to encourage each other to fast more often as their ancestors did. The answers are all in the surrounding environment. Only in seeking knowledge in the right places will we find the answers. Learning from nature has been the catalyst for centuries of survival in a harsh environment. Nature can provide the means to survival today and in the future.

In order to learn, it is necessary to 'become embedded in the culture in which the knowing and learning have meaning' (Wilson, 1993, p. 77). Learning cannot take place in isolation; entering into meaning systems shared by others requires entering into relationships with those others. (Jacobson, 1996, p. 23)

There is a need for further research about Apsaalooke history and the transference of such knowledge. There was information and knowledge about Apsaalooke people that was not pursued in this study. The focus of this study, regarded one part of the Apsaalooke people's way of life. Transference of knowledge regarding historical uses of natural resources is a small portion of the Apsaalooke people's oral history. In conducting more research, more Apsaalooke scholars need to get involved in researching the oral history of their people. An enrolled Apsaalooke member has advantages, knowing and understanding the language, customs, traditions, and culture, over those who are not tribal members.

The Apsaalooke people must continue to seek ways of involving the elders in the retention of historical knowledge. Adult education must be viewed as a means to continue the passing of historical knowledge. In many ways, adult education is the best way of preserving, protecting, and perpetuating these valuable pieces of historical
information about a fading way of life. It has been mostly the adults that have maintained the Apsaalooke language, culture, traditions, values, and beliefs. To understand the processes of learning and the value of having such knowledge, the participants in the process need to live in and understand the culture.
REFERENCES


Howe, Robert (No Date). Economic Development Plan, Unpublished Report to Crow Tribal Administration, Crow Agency, MT.


APPENDICES
APPENDIX A

LETTER
Dear Sir or Madam:

Hi, my name is David Yarlott, Jr., a Crow Indian student at Montana State University in Bozeman. I am working on my Doctorate Degree in Adult and Higher Education and as part of my Doctoral requirements, I am conducting a Dissertation research regarding how the Crow Indians historically used animals, plants, minerals, and other natural resources. Examples of uses could be in food sources, shelter, clothing, tools, and medicines.

The historical uses of natural resources were chosen as the research topic, because of the lack of written documents pertaining to natural resources in the Crow Indian environment. My wish is to use the information for educational purposes, to help retain some of the knowledge passed down from the Crow elders. This knowledge would be useful in curriculums at Little Big Horn College, so students would have access to this valuable information. I feel that some of this information is being lost and some form of record should be kept. With documentation, this knowledge could be preserved in the tribal archives. This process is critical to make sure the knowledge is passed on to the younger generation. One way of doing this is through this research. The research consists of conducting personal interviews with Crow tribal members, drawing information from storytelling (Crow oral history), finding information regarding animals, plants, minerals, and other natural resources, and documenting the findings in a dissertation report format. The gathering of information may require the use of tape recorders, written notes, and signing of release forms to use the information.

Your name was mentioned by other Crow tribal members as having knowledge or stories regarding how the Crow people historically used natural resources. I hope that you would be willing to share this knowledge by agreeing to be interviewed. I will be contacting you soon, to see if you would be willing to do an interview.

Thank you for your consideration and time. I am attaching a copy of the types of questions that I hope will be answered in the interview.

Respectfully,

David E. Yarlott, Jr.
APPENDIX B

PARTICIPANT INFORMATION FORM AND QUESTIONS
 GUIDE QUESTIONS

1. What are the Crow concepts related to natural resources (purposes, uses and stories)?

2. What influences determined which natural resources were termed valuable?

3. How was the knowledge of the different natural resources retained through the passage of time?
NATURAL RESOURCES IN THE CROW INDIAN ENVIRONMENT

STORY TELLING

1. What types of natural resources were used historically by the Crow's (plants, animals, minerals, etc.)?

2. How were natural resources used (shelter, food, tools, medicine, etc.)?

3. How did Crows know which natural resources could be used?

4. When and how frequent were natural resources used?

5. Were there any rituals connected with the use of these, natural resources?

6. What values were placed on particular resources?

7. How was knowledge of natural resources passed on to the generations that followed?
APPENDIX C

RELEASE FORM
THE MAINTAINING, RETENTION, AND PRESERVATION OF CROW ORAL HISTORY

"THE HISTORICAL USES OF NATURAL RESOURCES BY THE CROW INDIANS"

In partial fulfillment of Doctoral Degree requirements at Montana State University-Bozeman
Bozeman, Montana

ORAL HISTORY RELEASE FORM

I hereby give, convey, and consign to the researcher as passing on knowledge for such scholarly, educational, academic, and historical purposes as deemed appropriate to meet Doctoral requirements at Montana State University-Bozeman, of preserving Crow oral history, and of implementation of such information into educational curriculums, all legal title and interest in copyright in this specific tape-recorded interview and most particularly the exclusive rights of reproduction, distribution, preparation of derivative works, public performance and display, except for those restrictions as stated below.

RESTRICTIONS TO THE USE OF INFORMATION IF ANY:

________________________________________________________________________________________

________________________________________________________________________________________

Date of Interview ____________________________
Date of Agreement ____________________________
Interviewee’s Name ____________________________
(Printed)
Interviewee’s Name ____________________________
(Signature)
Mailing Address ______________________________
City, State, Zip ________________________________
Interviewer’s Name ____________________________
(Printed)
Interviewer’s Name ____________________________
(Signature)
APPENDIX D

TRANSLATION
CROW TRANSLATION

Apsaalooke diikuuko.... Hinne David Yarlott....
Iisaakshe, ehk Bozeman koon baachimmik.... Chung-Su
hua ii ehwachekaushatook.... Apsaalooke elahkuusssh
kuk.... Haassh, hinne baapesh.... ehk.... baape
classroom iishkuuwuan shalahhuuk.... Bale baachimme,
baawaalahche baakuussukkesh.... daak iik kuussheluk....
Kaala ehk kulecheek hinne.... David Yarlott....
Children of the Large Beaked Bird you listen.... This one David Yarlott.... young man it Bozeman there counted.... Chung-Su, is said with we know well it is.... Children of the Large Beaked Bird as you know is the one.... is said, this one day.... it.... day classroom inside said you.... Our counting, how make sign the highest.... again that you said now soon him/he/it getting it back this one.... David Yarlott....
You Crow people listen, this young man is David Yarlott. He is going to college in Bozeman. We all know him better as Chung-Su. You Crow people all know him. Today you talked about the different educational degrees you can obtain in the classrooms. Of the different degrees you have talked about David Yarlott will soon be getting the highest degree that can be obtained.