



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

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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.

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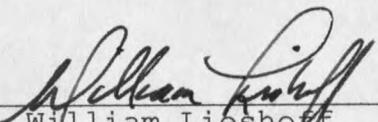
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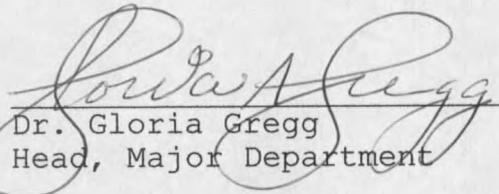
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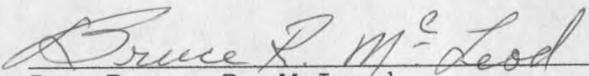
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BIOGRAPHY

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.

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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.

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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).

Commercial Economic State

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?

Definitions

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, signs 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 (*Ihchihchiaee*) 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

