

Yupiaq Education Revisited: Alaskan Native Education: History and Adaptation in the New Millenium

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Nature as Metaphysic

For the Yupiaq people, culture, knowing and living are intricately interrelated. Living in a harsh environment requires a vast array of precise empirical knowledge to survive the many risks due to conditions such as unpredictable weather and marginal food availability. To avoid starvation they must employ a variety of survival strategies, including appropriate storage of foodstuffs that they can fall back on during the time of need. Their food gathering and storage must be efficient as well as effective. If this were not so, how could they possibly hope to survive? To help them achieve this balance, they have developed an outlook of nature as metaphysic.

Not only are humans endowed with consciousness, but so are all things of the environment. The Yupiaq people live in an aware world. Wherever they go they are amongst spirits of their ancestors, as well as those of the animals, plants, hills, winds, lakes and rivers. Their sense of sacredness is of a practical nature, not given to abstract deities and theological rationalization. Pragmatism is the theme of their sacred ways. The Ellam Yua., or Creative Force, is not given the same ultimate stature as the Biblical God. Because nature is their metaphysic, Yupiaq people are concerned with maintaining harmony in their own environment. The Creative Force is acknowledged and often given gratitude, though it is the immediacy of nature that is most important.

The Yupiaq people have many taboos, rituals, and ceremonies to observe and practice that poignantly signify a harmonious ecological orientation. They behave accordingly

because of what their culture has taught as well as an abiding belief in what they and others have experienced first hand. There are mysteries of the world that to Yupiaq are unfathomable, such as the Ellam Yua, but these are accepted. Such mysteries keep them humble and ever mindful of the powers around them.

There were members of the Yupiaq community that transcended all human levels of knowledge. These were the shamans, the dreamers, and others who were receptive to nature's voices and intuitively deciphered a message which was passed on by myth, taboo, ritual, ceremony or other forms of extraordinary happening. The shamans were gifted to travel freely in the unseen world, and they often would return with new songs, taboos, rituals or ceremonies to teach. They were skillful with their knives and were able to reify their remembrances and impressions of the gift from a spirit with wood, bone, skin, feathers, and stone. These would become sacred objects to be used in special ceremonies. Amulets were also prescribed by the shamans to those requesting and willing to trade for them. These often consisted of animal parts and/or other pieces of earthly creations. Taboos were often conferred with the amulet or medicine bag, which was usually worn as a necklace or sewn somewhere on the parka. There are many stories of how they were used when encountering an antagonistic spirit, animal or another human being. This kind of healing is not new to the Yupiaq people. The patient's belief in its healing power most likely had a lot to do with the results.

The Yupiaq are told that if they take from another persons traps, the person may not know, but the Creative Force will see that people learn of their deeds and recognize the kind of person they really are. People may try to change a person's tendency for stealing by joking and embarrassing him or her in public. However, if there is no change, then he or she might be shunned by the community. Taking another's life without cause is considered a heinous crime with banishment from the village traditionally being the justice rendered.

The Yupiaq people were admonished to never do harm, abuse or even make fun of animals. Since Yupiaq people live in an aware world, the animals and everything else will always know. Several years ago, there was a news account of several walruses found dead on a beach with only their heads missing. The Fish and Wildlife managers lamented the fact that this was a wanton waste of meat and hides. One old Native man's comment to this was that it was unfortunate that it happened, and that the walruses had not been properly cared for. He concluded by saying that these animals would not be returning to earth. According to him, the misuse, abuse and disrespect shown the animals would cause the spirits not to return to earth to be born and renew their kind again. From a Yupiaq

perspective, this is why certain plants and animals have gone into extinction, and many others are on the endangered species list.

Certain animals represent power, e. g., the bear, the wolf, raven, eagle and beaver. Their commonality is strength and a strong will to live, along with cleanliness and care of self. Each possesses certain characteristics which set them apart from all others: the bear with its strength, the wolf with its social organization, the raven with its ability to remain airborne for great lengths of time, and the eagle with its visual acuity. The oil gland of the beaver is used for amulets, as well as for medicinal purposes. If a person has a shortness of breath, they can chew on a small piece and swallow the juice, thus relieving the stressful feeling. It is also thought to be particularly strong against spirits, so that merely having it in the hand is enough to keep a spirit at bay.

When the Earth's Crust was Thin

Stories and myths abound from Distant Time, when the earth's crust was thin, when it was easy for people and animals to communicate or transform from one to the other. Some tell of animals and birds wearing special parkas with hoods. If they needed to communicate with man, all they needed do was raise the hood, very much like taking off a mask. Lo and behold, there would be a human face underneath able to communicate in human language. This was an excellent way of learning about animals and how they wanted to be cared for once they gave themselves to the hunter. There is one important difference between human beings and animals. The animals seem to have not been given the knowledge of death. It is only the human who possesses this dubious knowledge. However, the Yupiaq person does not consider death the end, but rather a completion of a cycle which continues. As such, most have no fear of death.

The following story, told by William Oquilluk (1981), an Iñupiaq Eskimo from the Bering Strait area whose ways are very similar to the Yupiaq, provides an illustration of how observations of the characteristics of animals are integrated into the fabric of the Native mythology.

It is a story of "Two Brothers" living with their mother and father. They are young boys always roaming around their environment. One day the boys are walking amongst the trees when they spot a camp robber nest. The younger boy says to his brother that these birds always steal from the camps and that he will sharpen a stick and kill the young birds. This he does. He climbs the tree and as each bird opens its mouth, he thrusts the stick down their throats killing them. Finally, there is only one left and the older brother forces the younger boy down,

thereby saving one bird. Meanwhile, the parents are flying around making frantic noises.

One winter, when the boys are hiking around they spot a rabbit. They give it chase. They get separated and are lost. Many animals help each boy during the year. They are invited to homes very often housing small people. They are housed and fed for a few days. When it is time for them to leave, they are told to go a certain distance before looking back. One time when leaving a home, they looked back and saw a beaver house with two beavers swimming about.

The younger brother ended up in a large community house with many couples living inside. He stayed with them many days. Finally, the eldest man said that he hasn't much time to live, and that the boy will have to leave. The wife tells him how he had killed her children, save one. Because one had been left alive, she would spare his life, but he would have to take the girl as his wife. The little human beings changed to a variety of birds, and left in pairs each singing its own special song. He turned to look at the girl. She had changed to a full sized human being. They departed and went to their camp which turned out to be quite close by.

The older brother is shown by others the direction to go home. He soon joined the other brother. They grew to a ripe old age, and eventually the older brother died followed closely by his younger brother. The latter slipped into another world and immediately saw his brother walking toward him. He could see that his brother had a cut on his lip. He noticed that he too had a similar cut. He told his brother that this was his punishment for killing those birds. They pondered the question of where they should go. The older loved the land, while the younger felt at home in the ocean. They decided that they would separate and go to the place of their liking. The older brother became a rabbit, the younger a seal. To this day they are classified together as they both have cleft lips and are brothers!

Mythology is an invaluable pedagogical tool which transcends time. As the storyteller talks, the Yupiaq listeners are thrust into the world of imagination. As the story unfolds, it becomes a part of their present. As you imagine and visualize in the mind's eye, how could you not become a part of it and it a part of you? There is no separation. The story and words contain the epistemological webbing; how is it we got to know these truths? The storyteller's inflections, play on words, and actions give special meaning to the listener. How the participants are to act and interact in the whole are clearly conveyed. To the outsider attempting to understand the meaning of the experience, it may appear to be merely a story, but to the insider it becomes reality leading to a spiritual orientation in accord with nature. This is quality knowledge whose end is happiness and a long life.

The Yupiaq people are admonished not to take themselves too seriously, but to laugh at themselves, with others, and make light of a lot of life's triumphs and tribulations. Joking is a necessary part of life. No matter how serious a ceremony, there will be joking and laughing interspersed between singing, dancing and moments of silence. Silence is embraced as a time for introspection and collective mindfulness for a greater and better life. Because of this collective mindfulness, the individual man or woman becomes greater as a provider or as a homemaker. And as rational thinking would have it, the whole is always greater than the sum of its parts.

Through the millenia of their existence, the Yupiaq people worked as stewards of their world and maintained a balance between their culture, technology and the environment around them. Their psychological satisfaction with their nature-mediated technology was on an even plane with their technological attainments. This allowed for nature as their metaphysic. However in the last sixty years or more there has appeared an ontological discontinuity. This is the period of time in which they have participated in the destructive acts of misuse, abuse and disrespect of the ecological processes which produce life in their environment. How did they come about making this destruction of life? What has happened to cause their social organization to disintegrate with concomitant decay of their morality and disillusionment with their way of life?

Yupiaq Lifeways

Traditionally, men and women had very defined roles. The man was the provider, the one to work with nature in hunting and trapping. It was a solitary effort - solitary in that he did many activities by himself, but in reality was always accompanied by spirits and in close contact with the animals and earth. His role as provider was to learn as much as possible from his father, extended family members, elders and others, so as to be a success.

The woman, on the other hand, had to learn womanly duties from her mother, grandmother, and others. This included child rearing, food preparation, garment making, observing taboos having to do with menses and giving childbirth, and mindfully supporting her husband. The man's success as hunter was just as much her responsibility. They made up a team, complemented one another, and were very much equal in standing. The community members bondedness to each other was mutual, adding to their wholeness and vitality.

When a child was born, the name of a recently deceased person was anointed to the newborn by pouring a little water into the mouth or sometimes sprinkling onto the head.

Thereafter, that was his/her name. The gender was unimportant. The relatives called the baby by that name and the kinship term associated with the person whose name was bestowed on the child. For example, if the deceased person's wife addressed the child, she would address it by name then follow it with "my husband". Thus a "new relative" was made whether blood related or not.

The traditional houses in which families lived were constructed of sod in a semi-subterranean fashion. A high, dry location was chosen, a circular hole dug down three to four feet in depth, and then a framework of driftwood was constructed. Sod was cut and carried to the site and placed on the wood frame with the vegetation covered side next to the wood. Sometimes grass was placed between to serve as a natural vapor barrier. An opening at the top was covered with a seal or walrus gut canopy. This was removed when a fire was made in the firepit for cooking or a fire bath. The house was a circular and domed structure with an enclosed entranceway much like the snow igloos of Northern Canada.

The structure of the Yupiaq sod house has been likened to the woman's reproductive system. The ceiling's name in the Yupiaq language means "the above covering" a term which is now used to mean "heaven." The skylight is likened to the umbilical cord leading to the Ellam Yua, the interior to the womb, and the tunnel-like entrance to the birth canal, or "the way to go out." In the old days, when a person died, he or she was never removed through the entranceway, but through the skylight. The body was lifted and passed through the opening to the place of interment. The act was very symbolic of the spirit's journey to the spiritual land. The body was then placed with knees to the chest and arms around the knees bound together at the wrists—a fetal position, signifying completion of the life cycle and readiness for reincarnation and renewal. The body was then covered with driftwood or rocks, or sometimes with wooden planks, a canoe or kayak overturned with the body inside.

The *qasegiq*, or community house, was mainly the domain of men and boys prior to puberty. This is where much of the storytelling, teaching of arts and crafts, tests of skill and strength, and learning of rituals and ceremonies took place. It was the site of reintegration and renewal of spirit and where balancing occurred. When special ceremonies were conducted, participants from other villages were invited. The whole community and visitors from invited communities all participated and enjoyed the generosity of the host village. They renewed acquaintances and made new friendships, acknowledged the unseen greater powers, paid respects to their ancestors, celebrated the

animal spirits, and even made a few marriage arrangements. The ceremonies reaffirmed the truths that the people chose to live by.

Much of man's and woman's activities were patterned to the landscape. For those living on the upper riverine systems, the activities were bound to catching and preserving fish and hunting for land animals. Those on the coast hunted sea mammals, fish and seasonal birds and eggs. The technological tools and implements were made from natural resources most abundant in their location, or were gained in trade from other areas. The materials consisted of wood, bone, stone and skin, or sometimes nature-refined copper. They may have intuitively known that their technology would be restricted to unrefined natural resources, and that this would conform to their nature-adaptive orientation.

They may have observed themselves and others aging, tools wearing out, rivers getting shallow and changing course, trails where nothing grew, and that death and decay occurred everywhere. When a certain amount of matter and energy are no longer in usable state, some degradation is inevitable. Were they to refine natural resources, they would speed up the entropic process.

A few years ago, there was an old Native man on the Kobuk River speaking about the tundra fires raging about the state. He said that the earth is like a human being; it is aging, its skin is drying and greying. Therefore the fires never burn themselves out, rather they have to have firefighters or heavy rains put them out. He recalled fires years ago that naturally burned themselves out because of lush greenery and moisture. He talked of the earth as a living being, aging, decaying, and perhaps, needing to be renewed. The Creative Force has not the patience nor compassion to accept a people that defile and destroy, and will take the shortest route to heal a festering sore.

Consequences of Adaptation

The encroachment of Western civilization in the Yupiaq world changed a people that did not seek changing. The Yupiaq peoples' systems of education, governance, spirituality, economy, being and behavior were very much in conformity with their philosophy of life and provided for harmonious living. The people were satisfied with the quality of their life and felt that their technology was in accord with it. The culture- and nature-mediated technology was geared to a sustainable level of self-sufficiency.

The people in general were sufficiently content with their lifestyle that they did not readily accept Eurocentric education and religions when the first envoys of the dominant society set foot in their land. Eurocentric knowledge and technological might did not

bring the Yupiaq people to compliance—rather it was the incomprehensible diseases that decimated the people. A great number of elders, mothers and/or fathers, shamans and children succumbed to these new diseases. Whole villages were wiped out. The missionaries began to open orphanages and schools for the newly dislocated exiles in their own land. A hospital was located on the Kuskokwim river near Akiak and the Moravian Church established a "Children's Home" a short distance up river. The Federal Bureau of Education established "contract schools" with religious organizations. Money was paid to these organizations to establish schools and pay for the missionary teachers. The children were taught a new language (English) along with new knowledge and skills to become servants to the newcomers' needs and as laborers for newly established businesses. The Compulsory School Attendance Law was enacted, requiring families to remain in one location for many months of the year, thus ending the Native peoples' practice of moving from place to place according to the seasons and migration patterns. The restrictive law initiated a twelve-year sentence given all Native children to attend school. Today, that sentence has increased to thirteen, including kindergarten. This has greatly reduced the freedom of people to be who they are, to learn traditional values and to living in harmony with their environment. It has meant that the families and children no longer experience the great freedom of earlier times.

The schools do not require that the Yupaiq children learn their own languages and lifeways, but rather they are expected to learn a foreign language and the related humanities and sciences. The majority of teachers are from the outside world and have little or no knowledge of the people with whom they are going to be working. To the original people of the land, these are an immigrant people with a different way of being, thinking, behaving and doing from the Yupiaq. Few teachers recognize that the indigenous Yupiaq are not like other European ethnic groups, such as the Irish, French, or Italians, who have chosen to leave their homeland. By not teaching the Yupiaq youngsters their own language and way of doing things, the classroom teachers are telling them that their language, knowledge and skills are of little importance. The students begin to think of themselves as being less than other people. After all, they are expected to learn through a language other than their own, to learn values that are in conflict with their own, and to learn a "better" way of seeing and doing things. They are taught the "American Dream" which, in their case, is largely unattainable, without leaving behind who they are.

The messages from the school, the media and other manifestations of Eurocentric society present Yupiaq students with an unreal picture of the outside world, as well as a distorted view of their own, which leads to a great deal of confusion for students over who they are

and where they fit in the world. This loss of Yupiaq identity leads to guilt and shame at being Yupiaq. The resultant feelings of hurt, grief and pain are locked in the mind to emerge as depression and apathy, which is further reinforced by the fear of failure in school, by ridicule from non-Natives, and by the loss of their spirituality. There are many contributing factors as to why Native children do not excel in school. I advance the following as a possible variable. I will do this by telling you a Yupiaq story:

Aka tamani, ellam kainga mamkitellrani, In distant time, when the earth's crust was thin, is a crane flying around looking for a likely place to eat. The sky is blue, the sun is shining, the tundra is warming. The crane decides to check out the weather. He begins to fly in a circle. Each time he completes the circle,, he gains altitude. He looks at earth from a very high altitude. He then decides to descend and look for food. He flies over a river and sights a skin boat with Yupiat in it slowly paddling down the river. He continues his flight and sees a lake. He flies to to it, and finds many kinds of berries. He is very hungry.

He lands on the river bank. He contemplates going back to the tundra to eat berries, but his mind cannot forget the Yupiat coming down the river. He knows that he could be hunted. He must think of a way to warn him when the people approach. He sits there and thinks. He finally decides that he will use his eyes as sentries. He removes his eyes and puts them on a log. He instructs the eyes by telling them, "Now when you see people coming down the river, you warn me. I will come down and get you and fly off."

After telling them so, he goes back to the tundra and starts to eat berries. Soon he hears his eyes shout, "Crane, crane, there are people coming down the river!" He hurries down, finds his eyes and plucks them back in the sockets. He looks. There is only a log drifting down the river. The branches must have resembled people. He gets upset and says to his eyes, "Now you be very careful and make sure they are people before you call for me." He goes back to the tundra and eats. Soon, he hears his eyes calling him, "Crane, crane, there is a boat with people in it coming down the river. Come quick!" He hurries down to the log and picks up his eyes and looks. There is only a chunk of tundra drifting down. Tufts of grass move up and down with movements of the clump of tundra.

"Now, look eyes you have made a second mistake. Look very carefully before you call for me. I'm going back to eat some more berries."

Soon afterward, the eyes call, "Crane, crane, people are coming down the river in a boat." This time the crane does not heed the call. He is thinking, "Well, I suppose they see something else that might resemble a boat and people. This time I won't respond." He continues to eat. Soon the eyes call, "Crane, crane, the people are almost upon us. Come quick." He does not answer.

Some time elapses, then he hears the eyes calling from a distance, "Crane, crane, the people have us, and their taking us down the river."

The crane runs down to the riverbank and finds the log. He feels around, but there are no eyes. He sits down and thinks, "What am I going to do for eyes?" After much thought and consternation at not being able to see, he ambles back to the tundra. A thought occurs to him, "Why not try berries for eyes?" With that he finds blackberries. He plops them into his eye sockets. Lo and behold, he sees, but the world is different shades of black and grey. This can't be, so, he disposes of the blackberries. He finds salmonberries, and tries them. But the world is orange with its color variations and does not look right. So, he gets rid of them. He tries cranberries, but again the world is not the right color. It shows a place of red hues.

Finally, he tries blueberries. This time, the skies are blue, the tundra is green and varied in color, the clouds are white. Whew, these are to be his eyes. And, that is how the crane got BLUE eyes.

This is very mythical (as defined by Joseph Campbell) and magical. The myth is an analogical way of relating to their environment; it reflects the human minds response to the world; it has to do with understanding; and it tells them that we humans have the heavy load of intelligence and responsibility to have a beautiful world to inspire them; and it is healing. The Yupiat people accepted this on faith because of the need to know and understand. To them, it made beautiful sense. If these people believe in a worldview that includes a language, an ecosophy, epistemology, and ecopsychology all contingent on Nature, so why should the things of Nature not be understandable and interchangeable. All have a spirit therefore a consciousness, an awareness of the world around them. So, the eyes are able to communicate, perhaps, not verbally but maybe through unsaid words. To the Yupiat listening not only with the ears but with the mind and heart were essential to become aware of patterns of events that natural laws describe. The sun will rise and descend each day, the earth will continue to revolve around the sun, the spruce seeds will germinate, and so forth. These recurring phenomena will continue to occur in a given way. We accept these on faith that life is science.

Case in point is the crane flying in circles and ascending. The Yupiat knew that the tundra warms under the sun. This becomes visible as one looks out across the tundra. One can see a disturbance over the tundra, heat waves rising. They know the scientific principle that hot air rises. This is the principle that the crane is using to get high into the air to look around. Is he not a scientist? Nature is science, science is nature.

The Eurocentric scientists tell us that a gene or a combination thereof will produce an eye. After seeing this happen time and again, we accept on faith. We will never understand the creative design behind the genetic mechanism for producing the eye, just as we will never know what creative forces or what entity started the physical laws into motion to bring about the "big bang". The scientific laws of nature merely explain or describe what physicists, astronomers, astrophysicists and others have observed. The preconditions leading to this phenomenon has not been seen and are unimaginable. The Yupiat accept that which is unknowable, uncontrollable and immeasurable.

The Eurocentric scientists tell us many things, such as that there are particles in the atom that are so small that no one will ever be able to see. They exist only in mathematical statistics. But, we as a people accept these on faith. Do mathematics and physics really exist in Nature, or are they merely constructs of the human rational mind to try to make sense of this world? The important aspect to consider is that the modern creative scientist only deals with the physical and intellectual essences, in other words the outer ecology. In addition, the modern scientist makes theories based on sometimes limited facts, and these theories are made to fit their constructed technocratic societies. They do NOT necessarily fit reality. If these socio-politico-economics and scientific theories do not describe reality, they most certainly will not work in tribal societies because they are transrational. Perceptions can be far removed from what is real, and in Yupiaq thought are incomplete and often erroneous knowledge. This fragmentary approach disassociates them from the whole. In trying to understand the parts to understand the whole, and their scientific methods skew their way of looking at things. Their assumptions and expectations muddle their efforts to see things as they really are. The Native creative mythology deals with the whole ñ physical, intellectual, emotional and spiritual of inner and outer ecologies. The Native person realizes that he/she is a microsm of the whole, the universe. Therein lies the ultimate difference between the two.

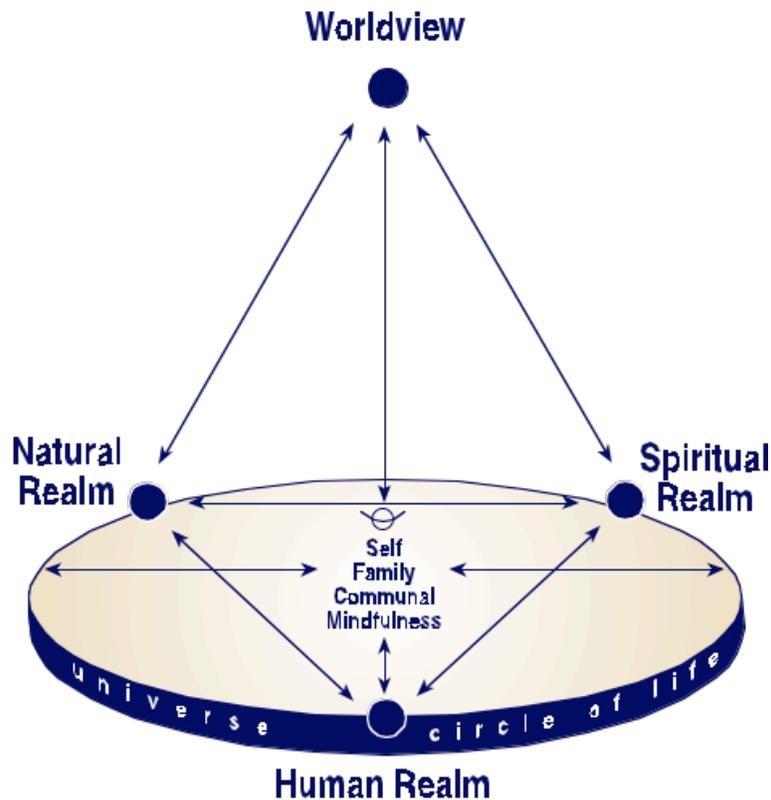
Another problem is that the scientist's own identity remains a mystery. They try to control nature for narrow dehumanizing purposes. They invent antibiotics and weapons of mass destruction. Their lack of self knowledge leads itself to nature keeping its secrets when we most need to let the book of Nature speak for itself.

The above Yupiaq story is a creative mythology of our ancestors. But is not the physicist who creates the statistics of unseen particles a creative mythologist? Is not the genetic microbiologist who determines what gene(s) cause alzheimer's a creative mythologist? Is not the microbiologist who creates a clone of a dog, not a creative mythologist? This latter thrusts me into the technomechanistic world whereby things discovered are

rendered into useful tools and gadgets, such as the 747 jet, the snow machine, outboard motor, cloning living things, antibiotics, fluoride toothpaste, skyscraper buildings, and plastic raincoat. All are intensive in the use of natural resources and energy. They do not consider that the natural resources and energy sources of Mother Earth are finite, but the ultimate is to gain control over Nature and manipulate it for purposes of humankind. Supposedly, in the Eurocentric eyes, technology will produce more food, energy and natural resources when they are used up. "Technology is the answer! (But what was the question?)" is a quote from Amory Lovins. Often, the industrial leaders are mainly concerned about financial gains which are driven by greed and ambition. Technological products and inventions are improved means to an often foggy or meaningless end. When a product such as a talking doll, cellular phone, new material for clothing are made, it does not change a small segment of life, but all of life. Psychological and economic change are impossible to measure, just as bad and evil cannot be quantified. Because of this technocracy has no conscience.

Mathematics, and the disciplines of science have their own languages and areas of expertise. Each are isolated from the other so that there is no understanding of interrelationships and interconnectedness of all phenomena of this universe. In fact, each area of study has its own contrived language which make disassociation with other disciplines and Nature easy. In these fields of study are an abundance of well funded research projects generating rampant information and technological devices. But, what do these means lead to? Surely, not to abundance of natural resources, natural beauty, and diversity, but, maybe, to natural degradation and poverty and confusion not only of humans but creatures too. Our education skews our view of reality because of expectations and assumptions it produces as to what it should be.

I now delve into the Yupiat ways of knowing and being in harmony with Mother Earth. I have enclosed a diagram of a tetrahedral metaphor of the Alaska Native worldview.



I have drawn a circle representing the universe or circle of life. The circle represents togetherness which has no beginning and no end. On this circle are represented the human, natural and spiritual worlds. There are two way arrows between them as well as to the worldview at the apex of the tetrahedral. These two way arrows depict communications between all these functions to maintain balance. The Yupiat say Yuluni pitallkertugluni , "Living a life that feels just right". One has to be in constant communications with each of the realms to know that one is in balance. If the feeling is that something is wrong then one must be able to check to see what might be the cause for unease or dis-ease. If the feeling of being just right comes instinctively and this feeling permeates your whole being, then you have attained balance. This means that one does not question the other functions intellectually, but that one merges spiritually and emotionally with the others. The circle brings all into one mind. In the Yupiat thought world, everything of Mother Earth possesses a spirit. This spirit is consciousness, an awareness. So the wind, river, rabbit, amoeba, star, lily, and so forth possess a spirit. The human consciousness with its ability to merge into one with all consciousnesses of this world produce the holotropic mind. The holistic mind is given to the nurturance of health, and an environmental ethic.

Thus, if all possess a spirit/soul, then all possess consciousness and the power that it gives to its physical counterpart. It allows the Native person to have the ability to have the aid of the spirit to do extraordinary feats of righting an unbalanced individual psyche, community disease, or loss of communication with the spiritual and natural world through irreverence toward beings of Nature. Harry Robinson (Robinson, 1992) calls this nature power, the life-sustaining spirituality. Dr. Grof refers to "power animals" (Grof, 1993) which gives its possessor the power to communicate with them, adopting aspects of their wisdom or power, and re-establishing links with them when the connection has been lost through negligence or lack of reverence, or by offending either the animal spirits or one of the greater spirits of the natural world. These are not available through Eurocentric scientific research methods but only through the ancient art of shamanism or Nature thought. From this you can see that when we rely on Eurocentric means of research, it is a limiting factor, and this is what our institutions of higher learning espouse and teach. All areas of social and scientific research teach one way of trying to learn and understand phenomena. Our technological and scientific training imprison the students minds to its understandings much to the detriment of the learners who enter the mainstream Eurocentric world to become its unerring members of progress and development.

The Alaska Native needed to take lives of animals to live. To give honor, respect, dignity and reciprocation with the animals whose lives were taken, the Native people conceived and put into practice many rituals and ceremonies to communicate with the animal and spiritual beings. These are corroborated through the Alaska Native mythology which are manifestations of fundamental organizing principles that exist within the cosmos, affecting all our lives (Grof, 1993). It then behooves the Alaska Native person to leave something behind such as a piece of dry fish when getting mouse food from the tundra. The mouse food is gathered in the early fall so that the mouse and its family will have opportunity to collect more food for the winter. The seal when caught is given a drink of water so that its spirit will not be thirsty when it travels to the animal spiritual kingdom. This is done to show respect to the animal for having shared and given its life to the hunter. Medicinal plants are gathered respectfully knowing full well its power to heal. It is also to recognize that these were given freely by Nature and that requires that we share these freely. The Alaska Native person is aware that if we do not use these gifts of Nature regularly, mindfully and respectfully, they will begin to diminish through disuse or misuse. Earth, air, water, fire and spirit must always be in balance. Its elements and creatures have an important niche to play in the ecological system. With this concept in mind, it then requires that we carefully examine the lifestyles and technology that is extant in this world. Our lifestyles have become materialistic and given to technological

devices and gadgets galore that are not geared to sustainability. Our modern cities with their network of buildings, transportation, communications, goods and services distribution centers are destructive and given to conformity. Likewise, the studies of natural resources are given to conformity. They are approached in a fragmentary way such as an expert in harbor seals does not know what the expert in herring fish is doing or has discovered. This type research is geared for measuring and objectifying the species studied for commercial purposes and not for sustaining Mother Earth.

In the Eurocentric world of science and technology exist many alternative approaches that are nature-friendly and sustainable. They await the time when the global societies evolve from consumerism and materialism to ones that are oriented to conservation and regeneration. As Alaska Native people and other indigenous societies, we have much to share with the modern world. I believe, it is much more difficult to live in tune with and in concert with Mother Earth than it is to plunder earth, air, fire, water and spirit using the sciences and their offspring the technologies as tools of destruction. With our realization that Eurocentric mathematics and sciences and the resulting technomechanistic inventions impact and change our ways of thinking and present new tools to think with, including the computer and other means of communications. These modern inventions and thinking are inimical to living in nature, with nature, and being of nature. It behooves us as indigenous and minority peoples to learn both ways of knowing and doing, so that we can begin to develop a caring consciousness and a technology that is kind to our being as humans, to the spiritual and the natural.

The question now is: How do we counteract the depression, hopelessness and despair that derive from the unfulfilled promises of the modern world, and what role can schooling and education play in this effort? To address this question, it will be necessary to take a closer look at how traditional education and Eurocentric schooling have fit into the lives of the Yupiaq people.

Learning From Nature

It is through direct interaction with the environment that the Yupiaq people learn. What they learn is mediated by their cultural cognitive map. The map consists of those "truths" that have been proven over a long period of time. As the Yupiaq people interact with nature, they carefully observe to find pattern or order where there might otherwise appear to be chaos. The Yupiaq peoples' empirical knowledge of their environment has to be general and specific at the same time. During their hunting trips into the tundra or on the ocean in the winter, they must have precise knowledge of the snow and ice conditions, so

over many years of experience and observation they have classified snow and ice with terms having very specific meanings. For example, there are at least thirty-seven terms for ice, having to do with seasons, weather conditions, solar energy transformations, currents, and rapid changes in wind direction and velocity. To the Yupiaq people, it is a matter of survival. This knowledge is passed down from generation to generation by example, by showing, and by telling with stories to reinforce the importance of knowing about the varying conditions. This comprises the rational side of the Yupiaq people.

The rational mind has the ability to see and store many bits of observed information, which can then be mulled over and shared with others for more ideas of what it may mean. This may evolve into a tentative assumption of how and why something is the way it is. Being self-aware of the subconscious and intuition, the Yupiaq people let it play in their minds until a direction or answer evolves. They observe nature's indicators and come to a tentative supposition, followed by testing with further observation of variables that may affect the conclusion. They know that nature is dynamic and they have to change with it. Thus their conduct of life changes with nature. They pass on the truths to the next generation, knowing fully well changes in interpretation will occur, but that certain of their values, such as caring, sharing, cooperation, harmony and interconnectedness with the created whole of their environment, will continue. This then validates and gives dignity to their existence.

One cannot be conscious of the world without first being aware of oneself. To know who you are, what your place in the world is and that you are to strive to seek life is what self-awareness is all about. It is the highest level of human knowledge, to know oneself so intimately that you are not afraid to tell others of life, and to help those that need help with compassion without being dragged down by the troubles of those being helped. Knowledge of oneself is power, and you acquire it by looking into yourself to see what strengths and weaknesses you have. You accomplish this through looking at your own reactions to everyday situations, both good and bad.

To achieve a secure sense of oneself involves meditation, visualization, intuition, and tempering all thoughts and actions with the "heart," which is on a higher plane than knowledge of the mind. "Heart" can best be explained by giving examples: to give freely of oneself to help a person with personal problems; to bring a little bird home with a broken leg and care for it to restore its health; to come upon a moose mired in soft snow and shovel the snow away to free it; to be motivated by kindness and care—these all involve the exercise of heart. You can recognize people with heart by the respect shown

them by others through kind words, inclusion in community activities, and acceptance as a stable and common-sensical member of the community.

The Yupiaq's careful and acute observational ability taught them many years ago the presence of a Creative Force. They saw birth and death in the human, and in nature. This Creative Force flowed through everything—the years, months, days, rivers, lightning and thunder, plants, animals, and earth. They were awed by the creative process. They studied, they connected, and nature became their metaphysic. It gave them empirical knowledge. Products of nature extended to them ideas for developing their technology. The spider web provided the idea for the net; the snowshoe hare's feet and tracks, their snowshoes; the mouse's chamber lined with grass, their houses; the moon's phases, their calendar; the Big Dipper and the North Star, their timepiece at night; wind directions, their indicators of weather; flint and slate, their cutlery. Certain plants and herbs gave them their healing powers and they discovered that certain living things were adapted to live in certain areas, while others were able to make physical adjustments through changes in coloration, forming a heavier coat for winter, hibernation, estivation, etc., all under trying conditions. They noticed change across time and conditions, and they recognized that they too would have to change with time and conditions to survive.

It was meaningless for Yupiaq to count, measure and weigh, for their wisdom transcended the quantification of things to recognize a qualitative level whereby the spiritual, natural and human worlds were inextricably interconnected. This was accomplished through the Creative Force having endowed all earthly things with spirits, which meant that they would have to deal with all things being alive and aware. Having a Raven as creator of man and woman and everything else ensured that humans would never be superior to the other elements of creation. Each being endowed with a spirit signified that it possessed innate survival skills. It had the will to live, propagate, and care for itself, thus the need to respect everything and to have taboos, rituals, and ceremonies to keep the three realms in balance.

Nature's indicators and voices give much knowledge for making a living, but the intuitive and spiritual knowledge gives wisdom to make a life. Therein lies the strength and tenacity with which the Yupiaq people continue to maintain their identity, despite assaults on the philosophical, epistemological, ontological, economical and technological fronts. Their template has certainly eroded, but the continuity of their ways to comfort and create harmony persists. As long as the Yupiaq peoples' spirituality is intact, they will withstand.

A Yupiaq Educational System

If the Yupiaq people are to really exercise the option of educational control it will require that the schools become Yupiaq controlled, Yupiaq administered, and Yupiaq in practice. Outsiders have to realize that outsiders' control, and the resulting forms of curricula and teaching are not well synchronized to Native consciousness. The Yupiaq people have not been dehumanized to the level that they are unable to devise and implement their own programs to release them from the clutches of poverty and self-degradation. Why should someone from the outside come in with foreign values and forms of consciousness and impose them upon another? The people know their reality far better than anyone else. The Eurocentric models of education and progress have not been able to bring to fruition their promises, so they must acquiesce in their "cognitive imperialism" and allow the Yupiaq people an opportunity to plan and work for their own destiny.

It is for the Yupiaq people to strive for an educational system which recognizes their language and their culture, including their methods of doing science, by which they have learned from their environment and have lived in harmony with it. They do not have to become someone else to become members of the global society, but can continue to be their own people. Yupiaq spiritual values are still applicable today because they are nature-based. Yupiaq consciousness has enabled them to be survivors for many thousands of years up through the 20th century. This survival continues as Yupiaq values, beliefs, practices, and problem-solving strategies are modified and adapted to fit contemporary political, educational, economic, social and religious institutions. Doing this allows the Yupiaq infrastructure to expand out from the village to encompass institutions such as Native corporations, schools and churches. The values embedded in these modern institutions are often in conflict with the Yupiaq, so a blending of traditional and modern values becomes necessary.

As Yupiaq people assert greater influence on the educational system, there will begin to emerge a Yupiaq educational philosophy and principles which give cultural and cognitive respect to the Yupiaq learner. Formal schooling can be coupled to the community in such a way that the natural learning that is already taking place can be validated in the same way as the formal learning which occurs in the school. Students can first learn their language, learn about themselves, learn values of their society, and then begin to branch out to the rest of the world. They may later make a choice as to what they want to do and where to live. Given such a foundation, they can fearlessly enter any world of their choice, secure in their identity, their abilities, and with dignity as human beings.

There is a crying need for healing among the Alaska Native people. One desideratum of this process is the need for Alaska Native people to retain their unique Native identities. This is best done through the use of the Native language because it thrusts them into the thought world of their ancestors and their ways of apprehending and comprehending their world. In the use of the Native language, the students begin to appreciate the richness and complexity of their philosophical and spiritual worldviews. Thus, the need for Native languages to be the foundation upon which the camps rest. The camps must also take place in all the seasons with the Native elders being the prime movers. The Native language description of traditional activities best convey the relationships between a Native concept and practice.

The bridging camp must not only include Native languages and practices but also Eurocentric scientific concepts and practices. All daily activities must be coordinated to effectively and efficiently teach and validate both thought worlds. The bridging camps must not overlook the Eurocentric mathematics and scientific concepts. The students have to have a keen understanding of science and research as many of these findings corroborate Native observations and also show why Mother Earth is suffering. Many research activities may be for the sake of science or research, but they do show globally stressed arenas. This makes it absolutely necessary that they learn Eurocentric concepts as well as their own ways of recognizing patterns, symbols, estimation/intuitive measurement, and ways of keen observation of place. The Native students have to realize that our ways of measuring and knowing are identity-building processes. Native students can then pursue careers in mathematics and the sciences but buttressed in a Nature-way worldview giving them a kind and polite disposition to the world.

The following are merely suggestions and may be revised to suit your own situation and needs. Three types of Alaska Native camps are described for our needs. The fourth are the AISES camps that are geared for the Eurocentric world.

Immersion camp: students who have a good command of the Native language or dialect of a particular region.

- all activities are done in the Native language only and addresses things done to make a life and a living;
- all planning and implementation always includes Native elders

- all activities are explained by elders and other knowledgeable Native people explaining what and why things are done the way they are for cultural adaptability and survival
- use of plants and animals, times for harvesting, how and why certain rules are followed to ensure continuation of species; explain the traditional preparation and preservation techniques; explain how the process contributes to natural diversity and cultural adaptability
- medicinal plants there use and how they have been preordained by the Ellam Yua to have power to heal certain diseases; harvesting process, preparation, preservation, how to use being mindful of the physical, mental, emotional and spiritual inclinations of the person; how does it contribute to natural diversity and cultural adaptability
- explore the Nature-mediated technology of the Alaska Native people—materials, preparation methods, explanations of why certain parts of materials are used, how the idea came about, function of parts, use and care of the item; does it have to be unrefined natural resources and why?, biodegradable, spiritual aspects, how does it contribute to natural diversity and cultural sustainability and adaptability
- knowing the natural sensemakers of Nature for weather, seasons, and flora and fauna
- knowing time, its measurement
- finding direction using Nature and sometimes stars
- using song, dance and drumming for transmission of culture, especially its spiritual aspect; bring to a realization that everything that a Native person does is a form of prayer and paying homage to the Ellam Yua or whatever name a tribe has for the Great Being
- use mythology and stories for value creation and teaching what it means to be human, "the entire process must be value-creating and give a cultural orientation—an identity"
- live off the land as much as possible using techniques and technology traditionally used

- the scheduling must be flexible and determined by the elders to do things when it feels right

Language development camp: students who have little or no understanding of the Native language, or have little or no speaking ability. The process is best determined by the elders and teachers. But, it would seem logical to start with the Native language being used with English interpretations, then progressing to an hour or two in which only the Native language is used. The last week may be all in the Native language. Otherwise all of the above apply.

Bridging camp: adding from the Eurocentric viewpoint to the above

- All or most of the above activities apply. All activities are coordinated to best bear understanding. The traditional activities are not separate activities from Eurocentric mathematics and sciences but are planned to be compatible with one another.
- determine the most used Eurocentric scientific terms and coin Native words for those words with help from elders and students
- in using Eurocentric science knowledge and theories determine whether that knowledge will add to or detract from one's Nativeness
- determine whether that Eurocentric knowledge is useful and applicable in place or is it just show 'n tell/extraneous knowledge
- use traditional estimation/intuitive measurement, recognition of pattern and symmetry without mathematical equations to confuse the issue—the universe is not all numbers
- use computers and other technological tools sparingly, "our memories are becoming obsolete"
- does adding this Eurocentric knowledge to the traditional enhance or detract from natural diversity and cultural adaptability
- does adding these technological gadgets to the camp add to environmental and mental pollution
- does it produce the value of cooperation and harmony or competition and individualism

- j) in what to include in the camp from the modern world, the planners and implementers should always have the values in front of them "for guidance"

To make the changes indicated requires a teamwork effort between the elders, parents, younger community members and tribal leaders. The elders have heard statements made that life in these modern days is much easier. They say that this is true only from the material point of view. It is easy to buy nets, traps, refrigerators, microwaves, snow machines, outboard motors, and so forth. It is easy for them to get general assistance and other social service monies to buy their needs. But, the elders say that there are hidden costs attached to these material benefits. They are taking part in the exploitation and control of natural resources with a concomitant development of personal avarice and ambition, making them more like the white man. Along with this change is pain and suffering due to conflicts with fellow Yupiaq people. The money will not flow forever, and what will the Yupiaq people do then, if they lose their language, natural knowledge, and their hunting, trapping and gathering skills. The elders say they are losing the knowledge and skills needed for survival in a fast changing world.

A Yupiaq Curriculum

The educational process must begin with the consciousness extant in each Yupiaq location. The school should not be compartmentalized into subject areas, but should strive for the care and nurturing of skills such as communication (in their own language and English), decision-making (through the use of common sense), analytical and critical thinking, and recognizing that there are many different ways of doing things. Teachers should use the community and environment as sources of instruction and learning. Elders should be included often to share their life experiences and observations. Schools are usually bereft of mnemonics to the communities' Yupiaqness. Artifacts, photos and posters pertaining to Yupiaq people, values, and admonishments to leading a good and long life should be highly visible. Local and visiting Native leaders should be invited to speak to classes sharing what it took for them to get to their positions.

Although exposure of students to Yupiaq arts and crafts is important, the philosophical, epistemological and ontological aspects of Yupiaq life should be woven throughout their educational experience. Art is an important avenue for opening new unseen worlds as well as getting to know oneself.

Science and art should be taught together. The Yupiaq technology and its applied science should be incorporated into all science courses. Students should be given opportunities to tinker with gadgets and work on projects for Yupiaq science fairs. At the secondary level,

the students should be challenged to try to think of alternative ways of doing things, such as making new tools and making things simpler. For example, they can use complex technology to develop simpler, easy-to-fix, less expensive, more energy efficient tools made of local materials and adapted to their needs and environment.

Students should be mindful that people are not the only inhabitants of earth, but that we share our environment with "others". All teaching should embrace ecology. What happens to one part of a system ultimately affects the whole. They should be invited to dream and talk about eco-development projects which would enhance the environment rather than detract from it. How might technology help to make the environment more beautiful and productive without artificial means such as chemical fertilizers, hormones, and chromosomal splicing? These modern technological methods try to emulate the Creative Force when we cannot know what the consequences might be.

Organic gardening should be explored using a wood frame with modern plastic covering to grow vegetables and berries. Many fish camps throw away the heads and viscera of the fish being split. A project might include students from different families collecting these and placing them in barrels or drums to make fish fertilizer. The fertilizer can be used to help grow vegetables and berries, with the students rotating responsibilities for the care and maintenance of the plot. Grown vegetables and berries can then be traded for fish, moose meat, and so forth, or put away for special ceremonies in the village. Some might even be used for school lunches.

The students can find out from elders about plants and herbs with medicinal value and begin to cultivate them in the classroom or hot houses. They can explore ways of using the available sunlight during the winter. They can talk about traditional housing technology—what it was made of, how it was constructed, and how it took advantage of the insulative quality of the ground and sod. Modern housing is built with attention to aesthetics , but often is heat inefficient. How might the houses be made better? What materials are available locally? What modern materials might be used as new building material?

Historically, the Eurocentric educational system told the Yupiaq people that their ways of doing and thinking were inferior. The schools took pains to change the Yupiaq cognitive map and introduced them to new kinds of houses, tools and gadgets. This not only cost the people in terms of their values, traditions and self-sufficiency, but as a result they became wards of the government—a despondent people dependent on the "good will" of

others. Education has made Yupiaq people consumers instead of producers in charge of their own livelihood.

The time has come for the Yupiaq people to pick themselves up and remember the spirituality, common sense, intelligence, creativity, ingenuity, and inventiveness of their ancestors. They must return to an emphasis on "soft technology"—technology that is adapted to culture and environment. They have been victimized, as have many other people in the world, by the myth of progress and development. Their minds are imprisoned by the modern world, with its syncopating lights and gadgetry that is hypnotic and desirable, but in reality presents a mishmash of images in a shotgun fashion, with little connection to the vagaries of real life. It is time for the Yupiaq to get in rhythm with their own culture. There is no need to forsake all that has been presented by others. Technology and schools have their place, but they must be used with reason and in a sacred way to edify and enhance Yupiaq peoples' culture, environment and the world as a whole.

Reference:

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