digenous people. We can no longer afford to misunderstand the interconnection between knowledge, essence, and origin. It is kin to separating creation, experience, and ideas from the notion of what culture is and who we are as evolving human beings. They're all related, and because each person is unique, each culture, then, holds a distinct way of viewing knowledge. And even the seven epistemological categories that I separated share fluid boundaries. Our utility is synonymous with relationship, which refers to spirit, which is the animism for the causation of words. It's all linked. Understand that the separation of categories was simply a way of discussing it. The whole in which Hawaiian epistemology exists is always greater than the sum of its parts. We are more than the average of a test score. We are more when we heal ourselves from the point of reference of an other we cannot possibly become. We are older. We came here for a purpose.

Find your purpose and be clear about it. Live it out and share it when appropriate. It has been an honor to address you here today. I am warmed and grateful and filled with peace. There is much, as always, to do-there is much more to undo. Mahalo.

Teaching Story

Spirit, Knowledge, and Vision From our First Nations' Sages

Angayuqaq Oscar Kawagley University of Alaska, Fairbanks

I am from the little village of Mamterilleq, which is called Bethel, the House of God-and it's anything but the House of God. My Yupiaq name is Angayuqaq, which in once instance could mean "parent" and in another instance can mean "chief." Of course, I prefer the latter.

My perception of myself is somewhat confused. As you can see, I'm Euro-traditionally dressed, and I expect you to abide by the Roberts' Rules of Order. I keep hearing about the protocol that the various tribes have, and I really respect that a lot. But I grew up with Roberts' Rules of Order. It's just now that I'm trying to get out of that mode.

In Alaska they are field testing an exit test for high school students. When they complete 12 years or however long it takes, they have to take an exit exam. If they pass it they get a high school diploma. If they don't pass certain segments, they can take the exam again. But if they fail again, then they get a Certificate of Participation—and I don't know exactly what that means.

Because I have the podium, I'm going to tell you a story. It seems that Forest Gump passed away, and he was on his way to the spiritual world. He was met at the pearly gates by St. Peter.

St. Peter said to him, "Well, Forest, you're going to have to take an exit exam. You're going to be exiting from the physical world to the spiritual world, and so I'm going to give you some questions to answer. Forest, are you ready?"

"Yeah, I'm ready."

"Okay, first question. How many days of the week have the letter 't'?"

"That's going to make me think."

"Well, how many days in the week have the letter 't'?"

"Two!"

"Well, how did you get two, Forest?"

"Well, there's today and tomorrow."

"Okay. The second question is a mathematical question. Forest, how many seconds are there in a year?"

"Boy, that's a tough one. I'm going to have to really think about it."

"Well, how many seconds are there in a year, Forest?"

"Twelve!"

"Well, how did you get twelve?"

"Well, there's January second ..."

"Third and final question. Forest, what is the first name of God?"

"Oh, that's easy. I really know that one. That's easy."

"Well, what is the first name of God?"

"Andy."

"Oh, my God, how did you get 'Andy'?"

"And 'e walks with me, and 'e talks with me."

So you can see that our perceptions can be pretty skewed.

I have written my talk, and it's unusual for me to refer to a paper. I usually write a number of words on a piece of paper, sometimes on the back of my business card, and give a presentation from that. But as you can see, I've been scratching on this paper since last night, making a lot of changes, and taking out some things that might be offensive to certain members.

I'm going to start by telling a couple of things about the loon. Some of you might be asking why is Angayuqaq going to be talking about the loon? In the Yupiaq language, we call it the *tunutelleq* and it means "that which is packing something." It has a burden that it is carrying, and indeed the loon is carrying a heavy burden that I hope to talk about in the next few moments. Wherever the loon exists, there are Native people, and of course you will have many loon stories. These stories are usually magical; they are mythical. Among them is the story of a young boy who is blind and is made to see by the loon. The loon carried him on its back and dived. The first time it dived and emerged, the boy could see a little bit, but very unclear; so the loon dived with him again the second time, and when he emerged, he could see a whole lot better. The third time the loon dived and emerged, and the boy could see well. And the loon helped the boy to see, so it can help us to understand ourselves and see the connection to Mother Earth today.

I use the loon because you, the Canadians, our Canadian neighbors, give so much honor and respect to the loon that you have put it on the one- and two-dollar coins. And from what I understand, they call the loonie and the toonie Loony Tunes. And for that reason, I wanted to talk a little bit about the loon because the cry of the loon is mysterious, it is mournful, and it is remembering place all at the same time. The call of the loon is God-given. It is its own language and understood by others of its kind and other creatures. Only we, with the ability to think and rationalize, do not understand, because we listen only with the mind, not with the mind and the heart, sprinkled with intuition. To some it is eerie, as if some dark thing is about to happen. Maybe an *alungruq*, an apparition or ghost of some kind is about to appear. Or perhaps it is signalling your own impending death. The call of the loon conjures up many thoughts that are not based on what is, but on *what if?*

This is the fear that most of us face as a Native people, especially when thinking about changing education. What if the educators, legislators, and powers that be do not believe and think that this could be done? Even so, we must take those steps necessary to change education and make an educational system that takes into consideration and is in fact based on our own tribal world views. In this context it will include our Native languages, our own ways of generating knowledge, research, ways of making things, and ways for using these things respectfully. What is wrong with that? Why should the loon have to change its cry to that of a seagull? All Alaska Native languages come from the land, are derived from the land. It is

the language of the land that makes our Native people rooted in harmony with nature. According to the Muskogee Cree Bear Heart, harmony is a tolerance, a forgiving, a blending. This is what our Native languages always can do.

However, when we change our language to English, we dissociate ourselves from nature. The many English nouns that we learn only give us the idea of an object. Our Native words come from the creatures and things of Mother Earth, naming themselves, defining themselves through the action of words. That is reality. Nature is our teacher. You see, information and rationality are a small part of the knowledge and learning that our modern schooling systems espouse. In the use of our Native languages we come to live life intimately, because we are enmeshed in it rather than looking at it from a distance through a microscope or a telescope.

It then behooves us to relearn our languages and to learn to live close to nature to regain our identity as a Native people. We have the secrets and the practices for living in harmony with nature. We therefore require our villages to make Native spirituality their community vision. When we have the vision and goal and work toward it, then we will have harmony. We will have tolerance. We will forgive, and we will again blend into our world. We will be using our five senses and intuition to learn about our place.

The loon has never lost its spiritual vision. It has a love for life, its environment, and its creator. Its education is from Mother Earth, for the heart, so it can become creative and go about and live in its community, its habitat. The loon still gets messages from its unconscious or new thoughts or solutions to problems, whereas we human beings have covered up our conscious minds with information and rational thinking. Our world and dreams are no longer sought through meditation, vision questing, fasting, and looking deep into the silence within us for direction. We have been taught to think of the now and its many concerns so that I think it has been reduced to "too much think about white man, no more can find dream." This is taken from David Suzuki's The Wisdom of the Elders. Not only have we become sociopolitico-economic dependents, but we depend on outside sources to take care of our problems, whether individual, family, or community. You see that the loon looks into its inner ecology, knowing that no one else can do that for it. It knows that it is incumbent on itself. For us to receive guidance and direction for our lives, we must relearn what the loon does naturally. We must look into ourselves, where power and strength lie, and tap into that source to begin to address our own problems.

Another strength of the loon is that it teaches and nurtures its young to live as loons. It does not need someone else to do the teaching. The loon develops the loon world view of its young by remaining closely connected to others and its place. As it migrates from place to place, it remembers and appreciates the diversity and beauty of nature. It nurtures its offspring to become independent, yet knowing its dependence on the abundance of nature to meet its needs. It teaches its young to do unto others as you would have them do unto you. This is true love. This is unconditional love that we need in this world: a love for self, a love for others, and a love for place, giving one the sense and responsibility to take care of oneself, to care for others and the environment that one lives in. The loon's cry is a remember-

ing of place that was harmonious, full of beauty and diversity, that nature so loves. This is heart talk. This is science, knowing place.

We have many, many problems today: environmental, social, political problems, and it is often due to the techno-mechanistic policies of work and development that flow from the technocracies in which we live. This troubled world continues to disbelieve Indigenous and other people who believe in living in harmony with nature.

I am going to tell you a story that my Yupiaq tells. In fact I use it when I teach junior high students about science, because I am thoughtful of biological sciences. Agatamaani, in the distant past, when the earth's crust was thin, a lot of things were possible when the energies were able to come up from the core of the earth. It was possible for animals to change into human form or in some instances merely to lift up the muzzle, as in the case of the wolf. Another need would be a human face, and you were able to converse in your own Native language. Anyway,, in distant times when the earth's crust was thin, a crane was flying. He was flying over the tundra looking at the many streams and the rivers and the lakes, and he would see occasional brush. As he was flying over a river, he noticed that there was an oomiak with Yupiat in it, and they were going down the river. And so he noted that. Pretty soon, he says, "Well, I'm going to check out the weather." So all of a sudden, he goes farther up toward the tundra and begins to circle, happily flapping his wings, and he gets higher, and higher, and higher. Ella paqeluku means he's checking out the weather by going up way high in the sky and looking down. So he checks out the weather, and pretty soon he starts to descend. Well, by the time he gets just over the ground, he gets really hungry, and he remembers the Yupiat up the river. He goes down the river and beside the lake he sees all kinds of berries. So he lands on the riverbank and he sits down on a log and thinks to himself, "Well, who am I going to use to warn me when the Yupiat come down? They will surely try to get me because they love fresh meat." So he's sitting there, and he's thinking, and after a while, he says, "I know what I'll do. I'll use my eyes as sentries." So he plucks out his eyes, puts them on the log, and he gives them instructions. "Now when you see the Yupiat coming down in their oomiak, warn me! I'm going back to the tundra and I'm going to eat some berries." So he goes back to the berries, and is eating berries, and pretty soon his eyes say, "Crane, crane, there are these Yupiat coming down the river!" So he rushes back down, and he finds that log, and he finds his eyes, puts them back in and he looks. Hey, there's an old spruce log drifting down, with branches. And he says, "Gosh, darn you eyes! Now you make sure that there are Yupiat next time, eh?" So he goes back into the tundra and eats some more. Pretty soon his eyes say, "Hey, crane, crane, there's people coming down the stream!" So he runs down to the log, picks up his eyes, puts them back in, and he looks. And there's a piece of the tundra that had sloughed off, floating down with tufts of grass, and they're kind of bobbing around, and maybe resembling people a little bit. Anyway, he gets really angry with his eyes, puts them back down, and says, "You make sure there's people next time." So he goes back to the tundra. "Crane, crane, there's people coming down the river!" "Oh, shoot! They're probably not people at all," thinks the crane. So he continues eating berries. "Crane, crane, they're getting closer and closer. Hurry! Come and pick us up." But crane just

continues to eat berries. Pretty soon he hears, "Crane, crane! The people have us, and they're taking us down the river." So he runs down to the riverbank, finds that log, and feels around, but there are no eyes. He plops down on the log, and he thinks, "Now what am I going to do for eyes?" Thinking for a while, he goes back to the tundra, saying, "I know—I'll try some berries." So he picks a couple of cranberries, pops them into the eye sockets, and he looks around. Gosh! Pink sky, and all the blends of red. And he says, "This cannot be!" So he throws them out. Then he picks a couple of blackberries, plucks them into the eye sockets and looks around. Gosh! Black to grey. "Hey, this cannot be, either!" So he throws them away, picks a couple of cloud berries, or salmon berries as we call them, and puts them in. "Hey! Orange, yellow. Boy! This just does not look real!" So he plucks them away, and he tries a few other berries, and pretty soon it's blueberries. He puts them into his eye sockets and looks around. Blue sky, white clouds, green in the tundra. "Now these," he thought, "should be my eyes." And so, according to the Yupiaq, that's how the crane got its eyes. And we accept it on faith too.

This story is mythical. It's magical. And yet my Yupiaq people, and even I myself, with a major in biological sciences, still believe it. It's gotten so important that we now have a little booklet for elementary students on how the crane got blue eyes. Very magical. We do that because there's a need for us to understand the place of the many creatures and plants living in our own world. To them and to me, it makes really beautiful sense. That's how the crane got blue eyes.

If we have that kind of world view, then we must have developed a language of our own. We must have developed an ecosophy, not a philosophy, but seeking wisdom from nature itself, and eco-psychology where we develop our understandings of what nature is capable of teaching us. We believe that everything has a spirit and therefore has a consciousness, an awareness of the world around them. For example, we don't even question how the eyeballs were able to communicate with the crane. We say, "Well, that's unknowable." In my Western education I conjecture and say, "Oh, gosh, gee-whiz—they were part of the crane in the first place, so maybe they communicated by telepathy. Not by words, but by telepathy." But anyway, that's part of it.

To the Yupiaq listening—not only with the ears, but combined with the heart—was essential to become aware of patterns and events that natural eyes describe. The sun will rise and descend each day; the earth will continue to revolve around the sun; the spruce seeds will germinate. These recurring phenomena will continue to occur in a given way. We accept these on faith, that life is science. The crane is flying in circles. The Yupiaq 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 of genes will produce an eye. After seeing this happen time and again, we accept this 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 and what entities started the physical laws into motion to bring about the big bang. The scientific laws of nature merely

explain the physicist's, astronomer's, astrophysicist's views. The preconditions leading to these phenomena have not been seen and are difficult to see. The Yupiaq accept what 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 them. 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 deals only with the physical and the intellectual essences: in other words, the outer ecology. In addition, the modern scientists make theories on limited facts, and these theories are made to fit their constructed techno-mechanistic societies. They do not necessarily fit reality. These social, political, and economic theories that describe the techno-mechanistic reality 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. When Yupiaq create mythology, it deals with the whole: the physical, intellectual, emotional, and spiritual, both of the inner and outer ecologies. Therein lies the ultimate difference between the two ways of making sense.

The above Yupiaq story is a created mythology of our ancestors. Is not the physicist who creates the statistics of unseen particles a creative mythologist? Is not the genetic microbiologist who determines what gene or genes cause Alzeimer's a creative mythologist? Is not the microbiologist who creates the clone of a dog a creative mythologist? This ladder thrusts me into the techno-mechanistic world whereby things discovered are rendered into useful tools and gadgets, such as a Boeing 747 jet, the snow machine, the outboard motor, cloning living things, antibiotics, fluoride toothpaste, skyscrapers, and plastic raincoats. All make intensive use of natural resources and energy. There is no consideration that the natural resources and energy sources of Mother Earth are finite. The ultimate is to gain control over nature and manipulate the techno-mechanistic purposes of humankind. Supposedly, in Eurocentric eyes, technology will produce more food, energy, and natural resources before these are used up. Technology is the answer, but what was the question? asks Amory Lovens. Often the industrial leaders are mainly concerned about financial gains and are thus driven by greed and ambition. Technological products and inventions are improved means to an often foggy or meaningless end. Products such as a talking doll or a cellular phone do not change a smaller aspect or a small segment of life: each changes all of life. Psychological and economic change are impossible to measure, just as good 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 is isolated from the others, so that there is no understanding of the interrelationships and interconnectedness of all phenomena of this universe. In fact each area of study has its own contrived language, which makes dissociation with other disciplines and nature easy. In these fields of study are an abundance of well-funded research projects generating rapid information and technological devices. But what can such generous support lead to? Surely not to an abundance

of natural resources, natural beauty, and diversity, but rather to natural degradation, poverty, and confusion. Our education skews our view of reality because of the expectations and assumptions it produces as to what reality should be.

Now I have to think a little bit about the Yupiaq thought world, and I have a drawing. Maybe some of you are familiar with the tetrahedral metaphor that I drew up several years ago when I was a student at the University of British Columbia. In it I drew a circle representing the universe and the circle of life. And the circle represents togetherness that has no beginning and no end. On the circle are represented the human, natural, and spiritual worlds. There are two-way arrows between them as well as to the world view at the apex of the tetrahedron. These two-way arrows indicate communications between all these functions of nature in balance. The Yupiat say, "Yuuluteng pitallekegtugluteng," living a life that feels great. One has to be in constant communication 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 of unease or disease. 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 Yupiaq thought world, everything that Mother Earth possesses is spirit. This spirit is consciousness and awareness, so the wind, the river, the rabbit, the amoeba, the star, the lily, and so forth possess a spirit. The human consciousness, with its ability to merge into one with all consciousnesses of this world, produces a holotropic mind. The holistic mind is given to the nurturants of health and environmental ethics. Thus if all possess a spirit or soul, then all possess consciousness and the power that it gives to the physical counterpart. It enables a Native person to have the aid of the spirit. It's an extraordinary piece of writing on unbalanced and individual psyche, community disease, or loss of communication with the spiritual and natural world, and irreverence toward beings of nature. Harry Robinson calls this nature power "the life-sustaining spirituality." Grof refers to power animals. These give their human "possessors" the power to communicate with them, adopting the aspects of their wisdom, their power, and reestablishing links with them for the collective. This connection with animals has been lost through negligence or lack of reverence or by offending, usually the animal spirit or one of the greater spirits. These spirits 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 if we rely only on the Eurocentric means of research, it becomes a limiting factor, and yet this is what our institutions of higher learning espouse and teach. All the research available is social and scientific research. The institutions of higher learning teach one way of trying to learn and understand phenomena. Such technological and scientific training imprisons the students' minds to a limited understanding. This is much to the detriment of the learners, who then enter the mainstream Eurocentric world to become its unerring members of progress and development. In Alaska the people take lives of animals to live, giving honor, respect, dignity, and reciprocation to the animals whose lives were

taken. They even conceive and put into practice many rituals and ceremonies to communicate to the animal and the spiritual communities. These are corroborated through the Alaska-Native ecology, which are manifestations of fundamental organizing principles that exist in the cosmos and affect all our lives. It then behooves the Alaska-Native person to leave something behind, such as a piece of dry fish, when getting mouse food from an animal. The mouse food is gathered in the early fall so that the mouse and its family will have the opportunity to collect more food for winter. When caught, the seal is given a drink of water so that the spirit will not be thirsty when he travels to the animal-spiritual kingdom. This is done to show respect to the animal for having shared and given its life to the hunters. Medicinal plants are gathered respectfully, knowing full well their power to heal. It is also to recognize that these were given freely by nature and that it requires that we share these freely. The Alaska-Native person is aware that if he does not use these gifts of nature regularly, respectfully, mindfully, they will decrease through disuse or misuse. Earth, air, fire, water, and spirit must always be in balance. These elements and creatures are the important ingredients in the ecological system.

With this concept in mind, we must carefully examine the lifestyles and technology that we have spawned in this world. Our lifestyles have become materialistic and given to technological devices and gadgets for war and are not geared for sustainability. Our modern cities with their network of buildings, transportation, communications, goods, and services, and distribution centers are destructive and given to conformity. Similarly, the studies of natural resources are given to conformity. They are approached in a fragmentary way, like an expert in seals who does not know what the expert in herring is doing or has discovered. This kind of research is geared for measuring and objectifying the special studies for commercial purposes and not for sustaining Mother Earth.

In the Eurocentric world of science and technology are many alternative approaches that are nature-friendly and sustainable. They await the time when global societies transcend consumerism and materialism and orient themselves toward 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 nature than just to conquer earth, air, fire, water, and spirit using the scientists and their offspring, the technologies, as tools of destruction. We realize that Eurocentric mathematics and sciences and the resulting techno-mechanistic inventions, including computers, affect and change our ways of thinking and present new tools for thinking with. These modern inventions and thinking are inimical to living in nature, with nature, and of nature. It behooves us, as Indigenous and Native peoples, to learn both ways of learning and doing so that we can begin to develop a caring consciousness and technology that is kind to us as humans, kind to the spiritual, and kind to the environment.

Book Reviews

Learning to be an Anthropologist and Remaining "Native": Selected Writings
Beatrice Medicine with Sue-Ellen Jacobs
Forewords by Ted Garner and Faye V. Harrison; photographs
Urbana and Chicago, IL: University of Illinois Press, 2001, 371 pages.

Reviewed by: Kathleen Buddle, University of Manitoba

The selected articles that comprise *Learning to be an Anthropologist* span a wide geographic base and a lengthy historical trajectory. The collected works address such central themes as Aboriginal authority and agency, the politics of difference, ethnic marking, culture change, and boundary-crossing. As is customary among Lakota speakers and reflexive anthropologists, Medicine begins by contextualizing her statements. The biographical essay from which the book's title is gleaned outlines the sociohistorical and political factors that bear on her work. This permits the author to situate herself in relation to kin, community, and fellow scholars, not without some overlap. What follows is anthropologically compelling not simply because it shows subaltern sophistication—although this may be news outside the discipline.

The work is of tremendous scholarly import, as it documents some of the major cultural transformations associated with the rise of Aboriginal modernities. Medicine's work chronicles the long history of Aboriginal urbanization and the Wounded Knee trials. It addresses the emergence of the American Indian Movement (AIM), Indian-operated schools and museums, Native studies programs, and the Friendship Centre movement. The work positions these historical occurrences within the legislative parameters that impinge on Aboriginal life and points out avenues for appropriate research among First Nations peoples in Canada and the United States.

The second of six sections delves into the complexities of Aboriginal education. Here the author deals with the multicultural context of Native communities and underscores the problems with context-insensitive, generalized solutions to the "Indian problem" in education research. Medicine speaks to the need for teachers to be trained in ethnographic methods and calls for the inclusion of Native perspectives in research design. Stressing cultural and experiential variability among Aboriginal nations, Medicine examines Native views of language and learning and probes the interconnections between community control over education, cultural revitalization, and self-determination. After outlining some of the unintended outcomes of historical Christianizing and civilizing policies, Medicine locates in Aboriginal education a critical nexus for the "intelligent blending of tradition and change" (p. 71).

Part 3 assesses stability and change in gender and cultural identity among Aboriginal urban migrants. By exploring the interaction of culture and sex roles,