

Earth, Air, Fire, Water and Spirit as a Foundation for Education

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Participants at the Cross-Cultural Orientation Program Camp at Old Minto gather on the banks of the Tanana River for instruction.

Modern science studies that which is visible using many technological devices to refine their observations. Theories are constructed, used, modified or discarded as new information and findings warrant. The task of modern science has been to simplify Nature, learn of its underlying logic and then use that logic to control Nature (Briggs, 1992:14). Indigenous societies study that which is invisible to temper the development of technology and guide its association with Nature. The Yupiaq society deals with trying to understand the irregularities of Nature which is underlain with patterns of order. Many unseen forces are in action in the elements of the universe.

To begin to understand these phenomena, Yupiaq science education must begin with the five elements—earth, air, fire, water and spirit. The sacred gifts of each must be understood, as well as the human activities which contribute to the despiritualization and reduction of these life-giving gifts. In order to be holistic, the activities must include Yupiaq language and culture, language arts, mathematics, social studies, arts and crafts and sciences. All must be interrelated as all of earth is interrelated. For example, in dealing with the element air, the teacher could select the sacred gift of weather. And what an unpredictable choice! Like many Yupiaq myths, weather is so very dynamic, ever changing, and, like the myth, very mystical.

The wind has irregularities of constantly varying velocity, humidity, temperature and direction due to topography and other factors. There are nonlinear dimensions to clouds, irregularities of cloud formations, anomalous cloud luminosity and different forms of precipitation at different levels. There are patterns, however tenuous, such as the path of a jet stream or fronts to be studied. The Native students' visual acuity and memory for detail could be used to advantage. There is very little in this universe which is linear, in a grid or in a two-dimensional square or three dimensional cube. The weather's dynamic is that the part of its part is part of a part which is a part of another part and so on. The local Native elders could explain how they were able to predict weather based upon subtle messages given to them by the sun twenty-four hours before it happened. This involves the language of feelings of the inner world coupled with the language of reason. Being inclined to the spiritual, the Native was able to understand and accept the unpredictable permutations of weather. The Native people had learned certain general predictable patterns of weather connected to the seasons and moons. Yet, the Native student could get acquainted with some more predominate tools of the meteorologist such as the thermometer, barometer, anemometer, hydrometer, satellite pictures and other tools to give the elders' knowledge depth, detail and a broader view. Introducing students to the notion of irregularities and anomalies of form and force (chaos and fractals) necessarily introduces them to holism. The key idea is for the students to understand the interconnectedness of all things in the universe.

Of utmost importance in using the five elements of life to teach science is assuring that the students understand that the sacred gifts of each is a gift to the life-giving forces of the living earth (or Mother Earth). The teacher must be careful to explain what those gifts are absolutely necessary for life on earth to continue. All these five elements' gifts make possible for creation on earth to continue. The Yupiaq honored and respected these gifts in the rituals and ceremonies. Take for example, the Nakaciuq or the "Blessing of the Bladders." The Yupiaq people believed that when the seal or some other sea mammal

gave itself to the hunter, that the spirit of the seal entered its bladder upon giving up its life. This required that the people take care to remove the bladder, inflate it to dry and save it for the winter Bladder Festival to honor the sacred gift of the element, spirit. In this way the Yupiaq people honored and showed respect for the gift of the element earth for giving birth to animals upon which they depended for survival as a people.

During the festival, the bladders were reinflated with life-giving air and hung on poles for the duration of the activities. In the qasgiq were placed two three-to-four foot stout poles in front of the place of honor for the elders. The honors seating was located at the rear of the community house. On the flattened upper end were placed two earthen lamps with wicks which were *then filled with seal oil. The wicks were lighted and the lamps kept burning during the entire festival. One or two people were given the responsibility of keeping the lamps going. The gift of the element fire was used to light and give some warmth to the community house. To purify the air and the participants in the house, wild parsnips were burned. Another gift of the element earth, the parsnip plant was used to create purifying smoke with the transforming gift of the element fire. Fire, with the gift of air, transformed the seal oil to heat and light.

At the conclusion of the Bladder Festival, the bladders were taken down, deflated, and carried to the ocean or river where an opening in the ice had been made. With collective mindfulness of all the Yupiaq participants that the spirits of the animals were happy and satisfied with the care and careful execution of the required rituals and ceremonies, and that they would return and give themselves to the hunters, the bladders were returned to the sacred gift of the element water, the womb of creation.

A multi-disciplinary and -sensory study of the elements can be undertaken for the entire school year. The students would begin to understand that the experience of knowing and making the place a friend takes time. The students can be helped to fine tune their endosmotic sense-makers through carefully planned and executed lessons of observation that incorporate their Yupiaq language of feeling with the language of reason. The ultimate gift is that of the element spirit. This gift is, through the Yupiaq language, mythology, rituals and ceremonies, the students are taught the “correct lifeway, a lifeway appropriate to place” (Mills, 1990:159).

The modern schools are not teaching students how to live a life that feels right. Rather, the schools are giving a lot of information to the students without also showing them how they can transfer the information into useful knowledge for making a living. Another step is to individually and collectively as a people see how the usable knowledge could be

transformed into wisdom to make a life. The students now look at an innovative teacher who refuses to use existing curricula, syllabi, lessons plans, media presentations, photocopied materials and so on, as not really teaching. They expect to be given a lot of information and to be entertained. The many machines, modern tools and the vaunted computers are not enough to teach a lifeway that feels right. It is more important that we use the Yupiaq values and culture well interspersed with imagination or intuition from within and the element spirit to make the new lifeway that feels right.

During the years which this activity is being done, the participants will explore, plan and implement ways to make the Alaska Native mythology as a teaching tool for the sciences as well as the humanities. Within the humanities (mythology) are the sciences and within the sciences are the humanities.

Kindergarten through third grade could possibly talk about the five elements generally. This is what earth does: it provides homes for people, animals and plants. Air is what you breathe. Fourth through the sixth grades can begin to talk about certain gifts that each element gives to earth to make it good and beautiful. They can begin to talk about the water cycle and begin to see how it is affected by the sun, water, land, air, plants and people. The junior high grades can begin to talk not only of the gifts, but how the activities of the human being affects the life supporting gifts of the five elements. The high school students can begin to discuss and research the five elements' gifts and how people and pollution reduce the life supporting role of the gifts. They can expand their knowledge of the Yupiaq peoples' perceptions and behaviors to the natural and spiritual worlds to keep them sustainable.

The teachers and teachers-to-be must be taught that the world is nonlinear and that, as a result, science will never understand everything about the universe. They must also realize and appreciate that in modern scientific and technological endeavors, mathematics, science and technology are interrelated as are all other disciplines. It behooves that science education and teaching in general become aligned to the common philosophical thread, or the "distant memory," as it is called by N. Scott Momaday, of the ecological perspective. All peoples of the earth began from this vista, and therefore such a perspective makes it more probable and possible for attaining a new consciousness for a sustainable life.

References:

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