EDUCATION AS A RITUAL PROCESS

A DISSERTATION

PRESENTED TO THE FACULTY OF THE

WESTERN INSTITUTE FOR SOCIAL RESEARCH

IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE DEGREE

DOCTOR OF PHILOSOPHY

BY

URMAS KALDVEER

DECEMBER, 1993

CERTIFICATE OF APPROVAL

I certify that I have read *Education as a Ritual Process* by Urmas Kaldveer, and that in my opinion this work meets the criteria for approving a dissertation submitted in partial fulfillment of the requirements for the Doctor of Philosophy at The Western Institute for Social Research.

_____ _____

John Bilorusky, Ph.D. Date
Director, Western Institute for Social Research
Dissertation Committe Chairperson

_____ _____

Cynthia Lawrence-Wallace, Ph.D. Date
Department of Teacher Education, UCSD
Committe Member

_____ _____

Nelson Williams, Ph.C. Date
Colleague, W.I.S.R.
Committe Member

_____ _____

Charles Nilan, Date
Colleague, W.I.S.R.
Committee Member

_____ _____

Lanny Cotler, M.A. Date
Outside Committe Member

ACKNOWLEDGEMENTS

In Chronological Order:

To my mother Erika Kaldveer, for her gentle yet deliberate encouragement to exceed whatever limits I imposed upon myself.

To my brother Peter, for almost always sticking up for me, but always giving me the benefit of the doubt.

To my uncle Van Moldre, for teaching me to use my hands as well as my mind and in so, giving me a freedom that has been invaluable.

To Macy Christ, for thinking the best of me even at my worst, and for bringing into the world two most beautiful children.

To my children Kersti and Zack, who let me try my best as a father and made that an easy process.

To Julia Gribble, for supporting me in ways she herself never knew.

To Dana Crumb, for convincing me that I really did have something to say, and making it possible to say it while she nurtured my children.

To John Bilorusky and the concept of WISR, for providing a haven for my ideas and for encouraging their development.

To my wife Susan, for giving me the inspiration to begin the work, and then the space to complete it.

To Janet Chaniot, for taking a raw, handwritten manuscript and translating it into a decipherable text, all the while encouraging me to write more.

To all my students, who kept the fire in my belly stoked with your interest and encouragement.

To my fellow teachers, I honor your devotion.

ABSTRACT

There is serious concern regarding the educational process as it now stands. A great deal of energy is going into determining exactly what it is that has gone wrong. The consensus within a large and influential part of the educational community seems to be that what is needed, is more stringent time allocation and more electronic input.

The focus of this dissertation is to propose an alternative resolution based on principles established at the very beginning of our (hominid) development. These principles, which involved the use of practical as well as mythical rituals, confirmed an individuals place in a higher order of reality and included music as well as dance. Throughout our early history the incorporation of this belief in ones place in the scheme of things acted as an inducement to the continued search for wisdom. Included in the information were concepts regarding everything from the progression of the equinox to the ethereal elements of a birds flight. The importance of establishing these universal concepts in students today is no less vital than it was two hundred thousand years ago, indeed it may be even more vital.

Through the perspective of history and current research in fields ranging from quantum physics to art, the question of the ultimate intent of education are examined. It is clear to even the most casual observer that somewhere in the history of our western culture the before mentioned concepts began to lose their role in the educational process. A discussion of when and how this occurred sheds light on the origin of some of our current concerns about the educational process. Using these insights, a proposal is presented which addresses the issue of ritual as integral to this process and how that can be effectively incorporated into our current systems. It is also proposed that this system, in and of itself, is a ritual that is common to all peoples throughout history.

It is not intended that this should be a definitive work. It is meant to create dialogue and perhaps encourage a slight movement forward. What is at issue here is what has gone wrong?, are there ways to deal with this issue in untried yet ancient ways?, and can these ways be implemented in our modern times?

The traditional Dine'(Navajo) philosophy of learning is embedded in oral traditions accounting for the creation and evolution of the Navajo world. This philosophy is based upon a view of man in nature—of the Navajo people deriving the powers of life, thought. speech, and motion from the forces underlying the workings of the natural world. Knowledge is identified with the cardinal directions: The values and other principles by which people live are identified with dawn and the East; knowledge for making a living , with daylight and the South; planning for social well being is identified with evening twilight and the West; contentment and reverence for all life, with darkness and the North. Knowledge from all of these sources is essential for a balanced life. The goal of life is to live in harmony with others in society and in nature—a condition called ho'zho'—resulting from balancing the four categories of knowledge.

CONTENTS

I. INTRODUCTION

Childhood Perceptions Regarding Education

As a child I was fortunate to have a rather vivid imagination that was regularly encouraged by my home environment. Support for it was provided in the form of adventure books and subtle, but effective, guidance into the popular movie media. Not that I was ever restricted from seeing or reading anything, but a definite direction was implied, and that direction was meant to embrace classical philosophy, literature, and science.

Within the pages of those books and upon the screens of movie theaters I was introduced to the images and concepts that had become established as positive and worthy of emulation. One of those images was that of the teacher, and the wisdom that he or she imparted to the world.

Generally, teachers were portrayed as individuals who had been initiated into a world of knowledge beyond that of the lay person (Clark, 1969). In the truly classical sense, these men and women were often portrayed as individuals who had, through some arcane process, achieved a state of wisdom and were thereby both honored, and to some extent, feared. One need only reflect on the image of Merlin, as representative of one of the more well known literary and perhaps historical "wisdomkeepers," to recognize the popularity of this image (Herm, 1975). Although he is perhaps the best known, he is only one of many literary and dramatic characters who perpetuate this special role in our culture.

It was the wisdom that these individuals represented that appealed to me as a child. There was also a degree of mystery surrounding the path to that knowledge. Indeed, a sense of some long-forgotten ritual process that was shared by only those devoted enough to follow the path.

Evolution of an Idea

As I became increasingly enamored with the prospect that there was a path (adventurous besides) to wisdom, I also became more and more interested in following that path, and believed that the extant school system would provide my needs. What I learned, of course, all too quickly was that there was little pretense of what the ultimate purpose of my education was to be, and there was certainly no ritual or arcane path implied. It became painfully obvious also, that the wisdom which I had come to honor so much, was seen as superfluous at best, to my future endeavors.

It was, I suppose, at this time that the question of relevance entered my consciousness. I found to my horror that there was very little relevance to my newly acquired knowledge, and the evolving individual who I was. Unfortunately, this never changed, and I found myself in 1969 with a bachelor's degree, a master's degree, and a partially completed Ph.D., still wondering when it would all become relevant.

I am only one of many who are aware that there existed, and still exists, a great void between the knowledge attained over the period of our education, and some higher level of awareness that should be in place by the time we emerge from our adolescence (Gyatso, 1992). Something is missing; somewhere along the road to the 21st century the path to knowledge, reason, and wisdom was deflected, and the process has itself been prostituted for the sake of social conformity rather than wisdom.

Concern About Education

The educational process has never in its history needed to be re-evaluated more than it does now (Clements, 1993, p. 4-5). This is recognized by groups as diverse as local PTAs' to governmental think tanks. John Gatto, New York City's Teacher of the Year in 1990, made the following remarks in a speech given at a ceremony in his honor: "We live in a time of great social crisis. Our children rank at the bottom of 19 industrial nations in reading, writing, and arithmetic... We seem to have lost our identity... Without children and old people mixing in daily life, a community has no future and no past, only a continuous present... I've noticed a fascinating phenomenon in my 25 years of teaching , that schools and schooling are becoming increasingly irrelevant to the *great enterprise* of the planet... The truth is that schools don't really teach anything except how to obey order... Schools are intended to produce, through the application of formulae, formulaic human beings whose behavior can be predicted and controlled... We need to rethink the fundamental premises of schooling and decide what it is we want all children to learn, and why... Experts in education have never been right; their solutions are expensive, self-serving, and always involve further centralization" (Gatto, 1991, p.55).

Relevance, identity, and the great enterprise of the planet, are keys in Gattos' presentation. He and many others in the field of education believe we have lost the path that addresses knowledge as a vehicle to relevance, identity and the Great Enterprise (Freire, 1973).

A 1991 article in the February issue of *OMNI* magazine focuses on the same problem: "Perhaps no crisis more directly affects the direction and future of our society than the crisis in education. When it is stressed at all, it is most often mentioned as a means of restoring our industrial competitiveness. Education then becomes an aspect of our economics, rather than a fundamental of our culture." The author of this article, Keith Ferrel, goes on to suggest: "Consider an alternative, suppose we return to the idea of education for the sake of social well being rather than economic health or industrial productivity" (Ferrel, 1991, p.12). A similar statement is made by George Leonard in the July/August 1992 issue of *NETWORKER* magazine: "What's needed today is a willingness to think the unthinkable - that school as we know it is doomed - and the will to create something new, to take its place" (Leonard, 1992, p.61).

Government reports, testimonials from professional educators, and interviews with students at all levels continue to support the very immediate and tragic realization that we have lost something in the educational process and are in need of finding a replacement soon (Gang, 1993). It is also recognized, that this replacement must address the entire process from a new perspective. The danger is that we may not be prepared to go as far as is necessary to remedy the situation.

Some Current Solutions

The simplest answers have been more money, more technological systems, and more hours (Meadows, 1993, p.15). None of these have worked; they all avoid the issue raised by Gatto and others regarding the why of education. One of those programs on the university level which is gaining popularity is the Thematic Option approach offered at the University of Southern California. In this program an individual chooses a curriculum that is designed to stimulate a broad range of intellectual and extra-curricular activities to provide for a "well rounded" human being. One if its core courses is titled, QUALITY OF

LIFE, and is described as "focusing on personal identity through textual analysis of great literary and philosophical works, from the Biblical and classical foundations of Western Culture, to the present" (Segal, 1992, p.2). Programs such as this, at various levels of education, are being implemented more and more, yet they still do not go far enough into the question of why the educational process has become such a failure. It is important to note here, that among some of the Earth's people, this is not the case. Not only is there a very clear idea of the why of education, but there is also a very clear and successful means of delivering it. It is the contention of a number of individuals, who are perhaps not "experts" in the field of education, that there is something inherent in the process of these successful cultures that we ourselves could use as models for restructuring our system (Hatley, 1988, p.13). The question of what constitutes a successful system is basic to my thesis, and will be elaborated upon in further chapters. Our reluctance to investigate these systems on an institutional level is an indication of, if nothing else, a first world bias against systems which appear primitive to us because they originate among those we consider socially and academically inferior. This is a tragic situation since it is very possible that at the core of these systems may be an answer to our modern dilemma.

What is Missing?

Again, the question may be, "What is it that we have lost in our educational process that has left the individual without a sense of identity or knowledge of their place in the great scheme of things?" As the venerated spiritual leader Kirpal Singh stated, "Somehow a student of today is unable to get true knowledge which could have helped him to acquire the right understanding of life resulting in right thoughts, right speech, and right action" (Singh, 1984, p.21). He went on to say, "In fact, the real aim of education is to develop the character and individuality of a pupil, his mind, will, and soul power. The best education is that which teaches us that the end of knowledge is service… "This service is another name for love and fellowship, which constitutes the very essence of personal and social life... To nurture these values, to practice them, and to adopt them whole-heartedly in life is what is known as spirituality." A similar perspective is encouraged by Richard J. Olds, when he recommends that students be reminded that within them is "the miracle of life, and with its blossoming comes the opportunity to pass on the real treasures of this world - love, sincerity, respect, and humility" (Olds, 1987, p.83). Later in this dissertation, I will present a number of examples of how the above philosophies have been instrumental in molding "successful" educational systems in the past and in some cases still do today. Whether Native American, Australian Aboriginal, Black African or Highland Indonesian, there are examples of educational processes that address the issues raised by John Gatto of relevancy, identity, and the Great Enterprise (Leaky, 1992).

And here we come to the foci of this dissertation: What is the ritualistic and/or ceremonial aspect, for indeed it is there, that exists within these systems that may account for their success?, How did we lose them?, Are they universally applicable?, Can they be recovered?

The term ritual will be used by me in its classical definition: an established procedure for a religious or other rite. A rite is a formal or ceremonial act or procedure prescribed or customary in religious or other solemn use. It is the aspect of solemnity (and reverence) that will be most thoroughly investigated through the course of this dissertation.

METHODOLOGY

In 1968, I wrote a masters thesis in microbiology on the effects of alloxan diabetes in the white rat. The section on materials and methods described chemicals, glassware, rat strain and testing procedures. Nowhere in that section, nor anywhere else in the thesis, was there a request for a description of my personal interaction with the research.

In the case of this dissertation however, the method behind my research is *founded* in personal interaction. It is rewarding, indeed, to be given the opportunity to share the journey of my lifetime as an integral part of this doctoral process.

As I stated earlier in this introduction I was drawn to the image of the wisdomkeeper as a child. I never quite understood why they were so often portrayed as somewhat eccentric—if not mad. I became convinced that the reason they were found to be a threat (for they always seemed to be seen as so) was because they held a knowledge of things that gave them power over other people. I was equally convinced that this knowledge may have been arcane, but certainly not out of reach of the common man and woman. I knew a number of people who were obviously familiar with at least some of this knowledge, and they did not appear the least bit threatening. Indeed, those exceptional men and women who I was fortunate to know all seemed far gentler and serene than the individuals I was expected by our culture to emulate.

Throughout my schooling, I kept myself open to any signs of this arcane knowledge within my peers or my elders. I naturally turned to my teachers as possible candidates but was most often disappointed. Whenever I lucked upon a true wisdomkeeper, I found my mind and my heart in a state of ecstasy. I suppose in a fashion I became addicted to the search. It took me some time to define exactly what it was I was searching for, but eventually the realization came. I wanted to understand my own place in the totality of the cosmos and then put that knowledge to work in the same way that the wisdomkeepers had. The search became much more disciplined at that time. I realized that in order to understand my place in the cosmos I had to know what the cosmos consisted of- astronomy, biology and chemistry seemed a good place to start.

Through the greatest of good fortune I found myself in 1973 as the first biology and chemistry instructor at a local community college. I suddenly found myself also responsible for the education of a number of people looking to me for learning. For nearly twenty years that role of teacher has forced me to constantly ask myself, "am I doing the right thing?" Not in terms of a profession, but as a service. It has been an extremely rewarding period in my life, and I have begun to understand, at least what I believe to be, a potential path to wisdom.

During my twenty years of teaching my interests have broadened, and I have been again fortunate to have the opportunity to share this with students young and old. Much of this broadening has been in the area of history and anthropology. It is through these disciplines that the ancient knowledge began to emerge. In time the question of my place and what service I might render became clear. At least a part of that service is to help create dialogue about education-what it is, and what it could be.

This dissertation is a first step in that direction. I have taken my experience of twenty years of teaching, evaluated it, and drawn upon what I have learned to formulate some ideas. I have included a survey that is admittedly limited, but nonetheless valuable. And I have presented some possible pathways to wisdom that are ancient, yet timeless.

A number of questions entered my mind in regard to education per se. What is its point? How did it evolve? What has it created? To answer these questions required a search into myself as well as the literature. From there I became intrigued with the possibility that there was something to be drawn from methods of information used long ago that perhaps contained valuable insights. This in turn led me into work I was familiar with due to my interest in anthropology -and from there into mythology and ritual. It was here that the research took an interesting turn into the science of neurochemistry. My earlier academic training in related fields allowed me a more than superficial understanding of the principles involved.

From these various disciplines, an idea began to formulate itself. Once the idea became concrete the next step for me was to determine its practical value and its appeal to the educational community. A survey was sent out and the responses noted. This dissertation represents the process in its entirety.

Direction of Dissertation

In order to understand the implications of ritual and ceremony in education, particularly in how its inclusion in the educational process has evolved, it is necessary to first establish a historical perspective. I will then give examples of two ancient and two contemporary systems which have found success through the concept of education as a ritual process. From there, I will offer my personal reflections after twenty years of teaching, plus discussions regarding the possible natural and practical benefits of such a system. In chapter seven, I will present the results of a survey, regarding the interest for such a system among a variety of educators, followed by a prototype curriculum that would incorporate this system into our present educational process. I will end with a discussion of the significance of my findings and the impressions I now have following this research.

II. HISTORICAL PERSPECTIVE

Beginnings of Education

How far back do we go to get our first glimpse of that all important moment in history when knowledge was recognized as valuable, and its passage from one generation to the next became a social phenomenon? Quite possibly, we may have to go back a million years or even more, to capture that particular moment (Hadingham, 1979). Certainly by the time of the great migration of *Homo erectus* from Africa to all corners of the Old World, it would have been expedient, to say the least, to have some pattern of formalized passage of information from one generation to the next (Harris,1977).

It was indeed not only expedient but absolutely imperative for the survival of the individual, and more importantly, the clan. We do not know exactly how the information was passed, but certainly by language as well as gesture (Sumner, 1963). Those individuals who showed greatest retention and beneficial use of the information became leaders, teachers, eventually shamans, and wizards like Merlin (Mishlove, 1975). There was quite certainly an element of ritual incorporated in the process, for was not the clan's life inexorably tied to its environment, and how the clan interacted within that environment determined its very survival?

What the rituals were we do not know, but during the million and a half years of *Homo erectus*, we can be somewhat assured that it reached formal levels, levels that included dance, chant, music, and perhaps the beginnings of a cosmology (Sagan,1977). Yet, the information within the ritual was of a very practical nature, dealing with fire and tool making, sewing and hunting. Indeed, it is quite certain that this information was highly ritualized in order to convey to the student the cosmic importance of this knowledge.

If this knowledge was used by an individual for beneficial purposes, that person would be designated as a wise person, or, a wisdom keeper. It is not necessary to draw too sophisticated of a picture here, but it is important to see its beginnings, "primal" as they may be. It is within the context of these early informational exchanges, that the foundations of the educational process were laid. What is also critically important here is to appreciate the emerging techniques within our earliest ancestors of levels of communication and information exchange that were not necessarily based in the limited contexts of verbal and gestural conveyance (Ranzi, 1982). I will elaborate on these paracommunicative processes later in this paper, for they are fundamental in understanding the universal significance of ritual in education.

Increasing sophistication

It is logical to assume that during the time of the Neanderthal people, (150,000 years ago), a more sophisticated concept of the importance of knowledge was extant (Hsu, 1972). This judgement is not reached by speculation alone, but by the apparently more advanced state of their social and technological systems, evidenced by relatively recent archaeological discoveries (Ranzi,1983). Perhaps most relevant to the theme of this dissertation is the apparent belief among the Neanderthals of a continuation of one's essence, or spirit, beyond the corporal body (Casson, 1977). The significance of this in regard to ritual in education is that it belies an emerging awareness of the wholeness of life,

its mystical properties and, perhaps most importantly, its perpetuation through knowledge and wisdom. Therefore the passing of information (knowledge) which leads to reason, which then leads to wisdom does insure the clan's position in the great continuum or Gatto's Great Enterprise. And what is of crucial importance, is the recognition that this "Great Enterprise" in itself is endless and not confined exclusively to the physical arena. A clear example of this are the Chumash five imaginal senses described below. By the time of our more recent ancestors, (35,000 years ago), the Cro-Magnon peoples, we are given more concrete evidence of a highly ritualized system of information transference. The cave art in Lascaux, France, dated between 20,000 and 15,000 years ago, is clear evidence of depiction of a natural world in which the artist was interested, "not with pleasing, but with invoking, and the purpose of the painting and engraving was vitally connected with the survival of the clan" (Hadingham,1979,p.204)). The art of this period abounds throughout Europe and Asia, consistently portraying the world of mankind, our place in it, and the need for knowledge to carry us forward in the Great Enterprise.

Most of the information however was still conveyed through language and gesture while the use of the more sophisticated visual aids of representative art and symbology were yet to come. In regard to those, thus far unexplained imaginal senses, it may be appropriate to at least name them, for indeed by the time of the Cro-Magnon people, these senses were surely developed and recognized as an important element in the evolution of the people. These senses are: The sense of self healing, the sense of self destruction, the sense of penetration, the sense of perception, and finally the sense of revelation. (Wolf,1991) These are Chumash (California Indians of Santa Barbara) concepts, and will be elaborated on later in this dissertation. Briefly, they refer to a perception of the universe, in which the human animal is capable of interacting with reality through the mind, in ways generally conceived of as paranormal. The sense of self healing is the recognition of the ability of the mind to strongly effect the healing process. The sense of self destruction is a similar, but reversed process of the mind, influencing an individual's ability to sustain life. The senses of penetration, perception and revelation, all pertain to the capability to penetrate the veneer which separates consensus reality from cosmic reality, allows us then to perceive of a broader reality, which then culminates in the revelation of one's true "place" in the scheme of things.

During this almost two million year period then, (three to four million if we include *Homo habilis* and their immediate predecessors, the Australopithecines), there was an unbroken line of human social and technological evolution based on a hunting and gathering existence in which the interconnection of all events and things was self-evident (Ferris, 1992). Individuals found all information relevant, their identity was secure, and it all insured the continuation (cosmic) of the Great Enterprise of life. Education was a matter of cosmic importance and was presented as such to each succeeding generation.

A Change in Direction

One of the first, and perhaps greatest changes in this two to four million year process, was instigated by our changing role from hunter-gatherers to agriculturists. In this change, we see the beginning of the process of education, as well as its ultimate goal shift from its original form and purpose to one far less universal (cosmic), and far less rewarding in any sense (Strayer, 1963). If the original purpose had been to acquaint an individual with the

mysteries of life, and then relate them to the group's everyday activities, it now became increasingly important for workers (toilers in the field) to use their time and energy to subdue and control nature. Education also became to a great extent, an endeavor available primarily to the elite (Langer, 1980). I refer to this elitist education of the time as focusing on the arts of reading, writing and mathematics. It is true that the great and rich stories of these cultures continued to be recited by the masses, but those who would eventually hold the power of the land needed a more tangible education. This transition did not come overnight, but by the time of extensive agricultural societies of five to six thousand years ago, whether in the old or new world, a hierarchy had definitely been established, and in this, only the wealthy and powerful were given access to the knowledge that lead to power.

Whenever wealth and power become the goal of a people, the results are usually the same–a loss of relationship to the natural powers and an eventual destruction through environmental abuse. An elite group of people determine the standards by which everyone else lives, and this includes the information that is made available to the masses. What education there is for the common people, is doled out in a form which perpetuates the status quo, and the status quo which agricultural societies required was the separation of man and nature. This separation was most effectively incorporated into the overall European ethos during the Renaissance. One cannot deny the benefits in art, science, literature, and medicine that accrued during this time, but it is equally certain that this period ushered in the mindset which allowed Europe to exploit nature on a level until then only hinted at by earlier cultures. What is of importance in this period to the theme of this paper, is that education in all areas was influenced by a basic philosophy which encouraged the individual to have less and less reverence for the natural forces which tied our species to the overall harmony of life on this planet (Martin, 1969). Its ultimate expression was evident in the Age of Discovery in which a small group of people (Western Europe) took this philosophy to include indigenous peoples as elements of nature to be subdued and controlled. The most blatant example of this attitude, and its ultimate consequences, was the conquest of North and South America, and the attempted destruction of an entire race of people numbering nearly 100 million individuals (Williamson, 1989). Let it not escape our attention, that this occurred at least in part, because the educational process itself had encouraged it.

Influence of the Industrial Revolution

It was not, however, until the advent of the industrial revolution that this mindset was fully imprinted upon western culture. Particularly in North America, life was still centered around the rural farming community until the 1890's. Even by 1906, more than 75% of American households were farming families (Hofstadter, 1955). This is significant in that, regardless of the influence of the Renaissance and the subjugation of the Native Peoples of America, most Americans maintained a contact with the Earth generated by their rural life style. The Industrial Revolution changed all of that within fifty years.

Whatever recognition of man's role in a benevolent nature had been preserved by rural lifestyles, it was quickly and effectively eliminated by the needs and goals of a country "on the move." The Great Enterprise of living in harmony with the environment, trusting and having reverence for its life-giving properties, was seen as suspiciously "Un-American". One need only look at the vehemence directed toward those early voices for reverence for

nature during the late 1800's and early 1900's, to see the enormous change that human perceptions had gone through since our days as hunter-gatherers (Miller, 1992). Whether we look at Whitman, Thoreau, Emerson or Muir, each was soundly criticized for their beliefs by a society too ashamed to admit their ecological folly. The situation now has come to a crisis. The evidence for the destruction caused by the "control" mentality referred to earlier, and the recognition that this could only have come about if the masses had agreed to it, points out the interconnection between education for material goals as compared to education as a ritualized performance to acknowledge oneness with the Earth.

When reviewing our educational history then, we see that there has indeed been a consistent departure from the recognition that we are, first and foremost, creatures whose life is still connected to the natural cycles of the Earth, and it is in the knowledge of this that our greatest evolution as a species can occur. Our education system has focussed on developing a synthetic purpose, the accumulation of goods as motivation for learning. Although it works to some extent, it does not satisfy the craving for wisdom, that which was once the ultimate purpose of the learning process.

III SUCCESSFUL SYSTEMS

Early Defiance

Throughout history there have always been those who have not accepted the road designated by the powerful. Whether this was a rejection of a social law, or the refusal to submit to a particular fashion in art, is immaterial; yet, without their courage, much more would have been lost than has been.

This is as true in the field of education, as it is in the arts and sciences. Not everyone in every culture has chosen to engage in the path from the sacred to the profane. At various times in different places, the purpose of education, was and continues to be, to guide the individual toward the ultimate goal of wisdom and harmony with the cosmos (McKenna, 1992). More often than not, this ancient path has been maintained by indigenous peoples, the "primal" peoples, who still inhabit small isolated communities throughout the world (Rudenko, 1961 & Spindler, 1963). There are still a few educational systems today that incorporate, to some degree, the essence of ritualized education. Today, it is within the public school sector, that we find the greatest need to inspire the student, for that inspiration is, indeed, what determines the desire to learn. Inspiration provides a reason to learn, a reason to become wise.

I would like to present a few examples of where ritualized education exists, both in indigenous primal peoples, and in contemporary alternative systems. It is important to note here that it is not the method so much that is critical, but the intention of the teacher (in the truest sense) and the ability of the method to incorporate the "spirit" of that intent. If the motivation for teaching is truly based on an attempt to pass wisdom, to encourage the use of all pieces of information and to use those to reason, with the ultimate aim of understanding one's place in the universe, then it must be manifested constantly within the framework of the educational system. It must always be central to the teacher's purpose, not as a forced belief system, but one that is seen by the individual as a foundation from which harmony and balance emerge.

One of Aristotle's prime directives to Alexander the Great was to honor all peoples' sacred beliefs and rituals, for within them, the people found strength and purpose (Casson, et. al., 1977). He also pointed out to Alexander, that the sacred beliefs of all peoples were similar at their base. That is, all cultures recognize the power of nature, and if one analyzes the rituals of a people, they are often found to be no different than one's own at this very simple, but so very important level.

Incorporation of Ritual

To a great extent, if not totally, when we look at the rituals of the world's peoples, past and present, we see that they all branch from one universal trunk. That trunk is the recognition of the essence of life as a phenomenon shared with all plants and animals, and in this sharing, the strength that comes from balance and harmony can be realized.

One example of the universality of certain rituals and their role as mediators of harmony between humankind and nature, is the practice of drumming. I will address this in much greater detail in another section of this dissertation, particularly in its relationship to learning. Suffice it to say at this point that it is very probable, that the act of drumming, is

one of the oldest methods of ritual learning, if only because the sound represents, "the beginning of our universe: mysterious forces came together and space, matter, and time began with a vibration unlike anything before or since. The big bang, a birth in chaos and din, was beat one" (Hart, 1991, p.11). To a very real extent, the role of ritualized education is to understand and resonate with Beat One.

Where do we find in today's world, people who are successfully practicing an educational system which incorporates ritual as a fundamental aspect of that process? Although there are many such cultures that exist in the world today, they are rapidly being eliminated. Not only by blatant physical destruction, but also by cultural obliteration caused by the world's political and economic infrastructure. It is known, for instance, that presently there are somewhere on the order of 6000 languages spoken in the world. We expect to lose 4000 of these by the year 2000 (Discover Editorial, 1993, p.82). It is within the language of a people that their uniqueness is fundamentally expressed, and it is within that language that the sound of their harmony with nature is conveyed. Each and every language, is more than simply a compilation of sounds to convey information, but an entire world view, in which the essence of a thing is captured. The loss of these languages, predicated by the greed of the First World for more and more resources, is a global tragedy.

Successful Ritual Systems

One large group of people, who have successfully maintained a system of education which addresses the essence of knowledge (harmony with the cosmos) and incorporates ritual as a fundamental vehicle for passage of this knowledge, are the Native American Indians. I refer to those people, both in North and South America, who have maintained throughout their long history an approach to learning that indeed recognizes "beat one."

One of the keenest observers and recorders of Indian education was Wharton James, whose book, *Learning from the Indians* (1908), was far ahead of its time in regard to recognizing the value in the educational methods of indigenous peoples. He was an intrepid scholar who saw within the North American Indians, many lessons for the European to learn. As might be expected, his work received little recognition and was actually highly criticized by the pundits of the day. His section on Indian education is simple, yet clearly defines the differences between the educational processes of the Native Americans and our own, with an equally clear and very fundamental vision of the consequences of each.

What is paramount in James' work is the acknowledgment of the personal element in Indian education, that is, a process of learning which is seen by the Indian child as absolutely relevant to his or her place in the universe. This is not just in the sense of learning how to sustain themselves with hunting, basket-making and the like, but a profound knowledge of the essence of his/her existence being tied directly into the forces of creation itself. The recognition that these forces are at work in every aspect of their lives is fundamental to their daily reality. This is accomplished, not by coercion or rote memorization or reading of lengthy books, but by the comprehension of how the information received is of a sacred nature, and this is in turn reinforced by surrounding the instruction with ritual. Some of that ritual is, again, the simulation of "beat one."

The reward of such a process, according to James, is "the fact that in matters pertaining to personal observation the Indian children are far ahead of our own brightest and smartest

children... indeed I have been saying, both privately and publicly, for many years, and I here repeat it, that if my children were trained to observe and reflect upon what they observed, I should not care if they never went to school until they were grown up to young manhood and womanhood" (James, 1973, p.131). Reflection is something not only omitted from the current learning process, it is considered a waste of time. Reflection is what allows one to roam in the fields of knowledge, and make fantastic discoveries.

Perhaps one of the most important works regarding Indian education, or at least, a description of the Indian mind, which helps us see the logic of their approach to learning, is Jamake Highwaters' book, *The Primal Mind: Vision and Reality in Indian America* (1981). Highwater examines the different way in "seeing" that he experienced when first going to a white school, and the realization, which was disorienting to say the least, that whites simply did not see the world in the same way as he. Fundamental to this realization was the later understanding of the difference between the white man's focus on individuality and the Indian's recognition of his oneness with all peoples and things without giving up the right to be themselves. At the same time, their individuality is assured by ritual processes, one of which is the naming ceremony. This is a common, but very important ceremony among North American Indians, which is for the purpose of recognizing the uniqueness of an individual.

Within the Indian educational process, this constant ritualized observance of a oneness with nature is reinforced. Again, music is often a vehicle for such ritual observance.

"Music is a ritual whose function is to help imperfect man become identical with perfect nature. Such music is neither egocentric, romantic self expression, nor artificial common sense, nor selfish pleasure, nor artificial Classical order,...such music is not expressing man instead of nature, nor nature instead of man - but man identical with perfect nature, bringing us to our very best... real, alive, free" (Dlugoszewski, 1973, pp. 3-11).

It is within the eloquence, spiritual and verbal, that the long-term wisdom of the Native American is witnessed, and it is a consequence of a history of oral tradition, ritual and learning which indeed crosses tens of thousands of years... Listen to their voices:

> *If you know my song, you know Charlie. Everyone has a song. God gives us each a song. That's how we know who we are. Our song tells us who we are.*
>
> Charlie Knight, Ute

> *With one mind we address our acknowledgment, respect, and gratefulness to all the sacred cycle of life. We, as humans, must remember to be humble and acknowledge the gifts we use so freely in our daily lives.*
>
> Audrey Shenandoah, Onondaga

> *It's time Indians tell the world what we know...about nature and about God. So I'm going to tell you what I know and who I am. You guys better listen. You got a lot to learn*
>
> Mathew King, Lakota

Everything I know I learned by listening and watching. Nowadays people learn out of books instead. Doctors study what man has learned. I pray to understand what man has forgotten.

Vernon Cooper, Lumbee

These days people seek knowledge, not wisdom. Knowledge is of the past; wisdom is of the future.

Vernon Cooper, Lumbee

He finally learned that wisdom comes only when you stop looking for it and start truly living the life the creator intended for you.

Leila Fisher, Hok

Let us live in peace and harmony to keep the land and all life in balance. Only prayer and meditation can do that.

Thomas Banyacya, Hopi

Appropriately, these are all quotes from the book, *Wisdomkeepers* (Wall & Arden, 1990, pp.12-119).

Having taught in an exclusively Native American Indian school, I was both depressed and yet delighted to find in 1985-86 that my presentation of scientific information was not being assimilated by my classes. I was naturally depressed to realize that I was not being effective as a teacher, but pleased to find that after some serious dialogue, I was informed of the problem. My approach simply did not address the sacredness of the cosmos and, therefore, seemed alien, and absolutely irrelevant to their lives. Fortunately, for both myself and the students, it was not difficult to refocus my delivery to a more "naturalistic/holistic" perspective. This approach had a great deal more success and led to a request for curriculum input at D-Q University in Williams, California. This is an all Indian institute for higher learning that is developing programs which will meld contemporary information with traditional values and concepts. Here again, I found that the element which was fundamental to the learning process was the relationship of the information to a higher knowledge of the role of nature in the world of every individual.

I have since used this lesson which I learned in every class I have taught, whether in the natural sciences or in history. Over and over again, this approach has been vindicated by the performance of my students on all classroom levels.

What is of greatest importance to note here is the very real effect that the acknowledgment of nature's fundamental and sacred role in our lives has upon a student's interest in educational material, and to realize that this is not just a creative way to present material in order to coerce interest, but that this approach touches an intrinsic chord within everyone, and that the continual striking of this chord is the ritual process of learning.

One may argue that this is all fine, but does it truly prepare someone for understanding great literature, philosophy or science?

The answer to this is best evidenced by the uncanny ability of primal peoples to absorb and understand contemporary material, as long as it is presented as part of a Great Enterprise. An excellent example of this, is the revelation of Dr. Fred Wolf, in his book, *The Eagles Quest* (1991), in which he finds that his years of study in physics, particularly

quantum mechanics, have given him an insight into the nature of the universe which very closely parallels that learned through ritual processes by shamans among many indigenous peoples. I will refer to his work again, when describing how this might occur. Suffice it to say, that he found, to his delight, that there was an underlying truth in his scientific perceptions that was shared, albeit in a different metaphoric context, by primal peoples, even to the extent of the most advanced concepts of physics. An example of this was his discovery that South American shamans had the ability to change least action pathways within the minds of their people, and thereby alter their reality structure. Least action pathways are those which we tend to use daily as we function within the consensus reality of the moment. That is, our agreed upon concept of what we see. Wolf found that shamans could alter that perception by inducing their subjects to move away from the purely functional and to access other pathways. This is very similar to the quantum concept that indicates that the act of observation creates the observed, as so elegantly proposed by Werner Heisenberg 50 years ago. Here it is seen as very probable that one's decision to see a certain thing in a particular way will create that thing as if it were "real".

The American Indian is not, of course, the only example of present-day ritualized learning. Those hundreds of primal peoples who still inhabit the earth from the Malay peninsula to the Arctic Circle, maintain a similar focus on learning and the seeking of wisdom as a fundamental process in the growth of an individual, and further that this process is directly related to the cosmos (Levin, 1963, Morgan, 1991, Perkins, 1965 & Reed, 1987).

The Australian Aboriginal Concept

I will briefly mention one of these groups, and then present two educational systems within our contemporary culture which have addressed this principle, and are using it effectively in the education of young people today.

The Australian Aborigines have successfully maintained a tight-knit, basically peaceful culture since their beginnings as many as 40, 000 years ago. The traditional learning process among these people is once again based on the relationship between each individual, and all that is around him, or her. An understanding of this place is seen as paramount in anyone's growth to an elder, at which time one is assumed to have attained wisdom. This wisdom is acquired through the ritualized process of identifying the natural world around them, and uses this as a base to begin understanding the intricate relationships that exist among all things in this natural world. It is in the understanding of these relationships, and how they pertain to the individual in all he/she does in life, that ultimately leads to wisdom. The process itself is a sacred path.

In her book, *Mutant Message* , Marlo Morgan (1991), relates her experience with a group of 65 aborigines, who in a sense, kidnap her. For three months she becomes a member of their clan on a "walk about." She leaves behind absolutely everything, from jewelry to hair pins, from camera, to shoes.

During the sojourn, she is initiated into the world of these people and is given an accelerated course in Aboriginal learning. It is to her great credit that she was both intelligent and sensitive enough to embrace the experience, and indeed, learn. What is of course relevant about this experience is that once again it is this inherent need to understand one's place in a greater whole that is underscored and eventually will lead to

wisdom. Once she becomes certain of her part in the Great Enterprise, she quickly begins to understand the interrelationships of people to people, people to animal, people to rock, and finally of herself to the cosmos. Ms. Morgan refrains from identifying exactly which clan group she associated with. The reason for this is clear in the end of her book, as they tell her:

> *"We, the tribe of divine oneness real people, are leaving planet Earth. In our remaining time we have elected to live the highest level of spiritual life, celibacy. We are having no more children. When our youngest member is gone that will be the last of the pure human race.*
>
> *We are eternal beings. There are many places in the universe that souls who are to follow us can take on body forms. We are the direct descendents of first beings. We have passed the test of surviving since the beginning of time. Holding steadfast to the original values and laws. It is our group consciousness that has held the Earth together. Now we have received permission to leave. The people of the world have given the soul of the land away. We go to join it in the sky."*
>
> Morgan, 1991, p.129

It is the teaching of what the soul of the land is, and how the Australian Aborigines pass that on to Ms. Morgan, that is particularly pertinent to the theme of this paper. During her sojourn with these people, her education takes the form of a ritual in which her place in the process is fundamental, not only in being the student, but also in seeing that the lesson is a natural, internal awakening to the oneness of all things.

Lest this be construed as an individual's retreat into the safety of anonymity, they went on to explain to her that each person is yet a very unique and individual essence. As her mentor Oota said, "To be one does not mean we are all the same. Each being is unique. No two occupy same space. As the leaf needs all the parts for completion, so each spirit has its special place. People can try to maneuver, but in the end, each will return to the right place. Some of us seek a straight path while others enjoy the weariness of making circles" (Morgan, 1991, p.109).

The above sentiment is interestingly reminiscent of the words of Teilhard de Chardin in his book, *The Phenomenon of Man* (1975), and another later spiritualist/naturalist, Loren Eisely in his book, *The Firmament of Time* (1960). Both of these men spoke for the natural classroom of the living Earth. This theme is repeated over and over again as an absolutely necessary foundation for the mental and physical growth of a human being.

The following are some of the fundamental lessons taught by the Aborigines. I provide them in their original words as given to Ms. Morgan.

> *"In order to know your home, the Earth, all its levels of life, and your relationship to everything seen and unseen, you must lead. It is fine to walk for awhile as the last one in the group, and it is acceptable to spend*

time mingling in the middle, but ultimately, everyone must at sometime, lead."

"Be water. Be water. When you can be water, you will find water."

"We think of divine oneness as feeling the intent and the emotion of beings. Not as interested in what we do as why we do it".

Morgan, 1991, pp.102-118

For Margo Morgan, the ritual of education was a three-month accelerated course in being. Each of the above quotations imply a recognition of the absolute truth of an underlying uniformity of being, that extends to all things, whether animal or mineral. This same recognition is beginning to surface in the sciences of the Western World after a prolonged dormancy initiated to a great extent by the Renaissance. Interestingly, it is in the fields of chemistry and physics, that this has become most prominent (Capra, 1975, Hawking, 1988 & Margulis, 1986).

It is the assimilation of this information, and its use in directing one's life, that the Aborigines and other primal peoples have always believed, and still do today, that leads to wisdom (Highwater, 1981).

Fred Wolf, in his experiences with various primal peoples, found that their concept of oneness not only included but existed outside themselves. In many cases they saw themselves as co-dreamers with the creator, and therefore THEY were all creation. Wolf believes that this is lost to contemporary cultures because we look for our place or I-ness within ourselves, and that the true location of the I, the agent of intent, is the entire world. What fascinates Dr. Wolf is the correlation between this primal perspective and the most recent discoveries in quantum physics. This is most delightfully seen in one of his dialogues with a shaman. After describing the quantum view of reality to this individual, Wolf was told by the shaman that he (Wolf) had it down pretty well but there were things he had yet to learn. What was shared by these two men was a recognition of the uncertainty of observation and therefore all of reality. It is within this world of uncertainty that Wolf sees the drama of life and place unfold (Wolf, 1992).

CONTEMPORARY SUCCESSFUL SYSTEMS

There are two examples I would like to now give of current educational systems that incorporate ritual in the form of learning as a Great Enterprise. I have chosen these two because I have taught in both systems, and am therefore, academically, and experientially, familiar with them.

The first is the Sant Bani School System, which is based on principles developed by the Sikh master, Kirpal Singh. The philosophical foundations for this system are found in Hindu/Moslem beliefs which were developed during the catastrophic division of India after WWII. I will not define these, for they are extensive, but, in general, they are predicated on the belief that everyone is a part of a greater oneness which is benevolent, gentle, and loving. This concept is considered fundamental to all further education and learning. The Sant Bani system contains schools, or "Satsangs", in which children are dutifully taught the necessary disciplines of reading, writing, and arithmetic, but, from a

perspective which encourages them to see these as manifestations of a shared reality, and that this reality has at its center, the journey of the mind and soul to wisdom.

It may be worthwhile to also point out that the Sant Bani system has at its core another belief, shared by the primal peoples mentioned earlier, in that they believe that, "the real aim of education is to develop the character and individuality of a pupil, his mind, will and soul power. The best education is that which teaches us that the end of knowledge is service" (Perkins, 1984, p.3). This is clearly, a continuation of primal beliefs that knowledge, in its final manifestation, is directed toward the good of the people. This is, indeed, its finest use. It is also clear, that as with ancient peoples, the Great Enterprise is viewed as a spiritual process, because of its eventual gift of enlightenment. As Kirpal Singh stated, "A school without a spiritual content, is an absurdity (Perkins, 1984, p.7).

The most important element underlying this system may be its recognition of the need to address the spirit of the child and their quest for relevancy, in a world full of conflicting and confusing images. Again, as Kirpal Singh said, "Education is not a withered parchment, but the living water of the spirit" (Perkins, 1984, p.13).

A fundamental aspect of this approach to education is the focus on the relationship of the child to the natural processes of life. This then leads to an understanding of the miracle (on a quantum physical level) that this biosphere represents. This in turn translates into an appreciation for life, which is shared by the many indigenous peoples of the world, and ALL of our ancient ancestors. As I stated in the introduction, there is little of this perspective encouraged in our modern, public schools.

The other system with which I am familiar with, is the Waldorf School System, developed by Rudolph Steiner, in the 1920's. Rudolph Steiner was a man of exceptional intellect and spirit, who became involved in education in the early 1900's after great success as an artist, architect, psychologist, writer, and lecturer (Carlgren, 1972). He began a teachers' training course in 1919, which drew immediate worldwide attention. One of his main assertions was that pedagogy could never be applied in any stereotyped way, for then, it would be dead. He stated that education is an art, that the teacher should practice in his/her own way, not according to rules.

Because of his popularity in Germany at the time, he was asked to develop a system in which his ideas could be used. Out of this came the Waldorf Schools, which are now worldwide and range from kindergarten to graduate school. It was in his book, *An Outline of Occult Science* (Steiner, 1972), that we see him addressing the issue of oneness with nature as a fundamental concept in the road to true wisdom: "It is evident that human life is related in the most diverse ways to its environment, to the dwelling place in which it evolves. By means of existing facts, even external science has been forced to the opinion that the Earth itself, this dwelling place of man in the most comprehensive sense, has undergone an evolution. It points to the conditions of Earth's existence in which the human being, in his present form, did not exist upon our planet. It shows how mankind has slowly and gradually evolved from simple states of civilization to the present conditions. Thus, science also has come to the opinion that a relationship exists between the evolution of man and that of his heavenly body, the Earth (Steiner, 1972, p. 132).

It is again this recognition of our place in the natural world that is critical to the continuing evolution of the intellect, as well as the physical body.

There are other peoples, other systems, both past and present, which could be given as examples of successful educational methods(Sarton, 1952). Among the ancient cultures, certainly the Egyptians are a classic example, and during the eighth century A.D., the Arabic peoples of Bhagdad. They all hold one thing in common: an appreciation for, and an understanding of, the nature of the universe and one's spiritual as well as physical place in it. All other knowledge and wisdom is thought to emanate from that point. That core understanding is what ritual is all about, for it is a solemn rite that instills that core knowledge, and it is that which we do not have in our public school systems today.

What is Success?

What tangible proof is there that any of these examples truly constitutes a successful system? We have used standardized testing to determine the success of our schools today. In order to prepare our students for the tests, we concentrate upon information that provides answers to the questions on those tests. Those questions are themselves designed to judge the ability of a student to carry out those functions that will perpetuate our social, economic and political systems (Touraine, 1974). Nowhere, is there any consideration given to the possibility that this particular system of "schooling for testing" has been instrumental in perpetuating the antiquated belief in "man the divine" popularized by the Renaissance , and to a great extent, creating the environmental and social problems we have today.

What, indeed makes these systems successful is that they all have as a fundamental aspect of their "schooling", an appreciation for the essence of life being far more than the continuation of a social system, but instead, a shared journey on the road to understanding the nature of the universe, and one's place in it. How does this manifest itself? The only test available, is the expression of an individual's guiding philosophy, and how that philosophy is translated into the individual's work, play and art(Sevigny, 1984).

Among the Australian Aborigines, it is manifested by each member of the clan seeing themselves as an integral part of a great oneness, in which the greatest good comes from the respect for all things, and the cooperative effort of the people.

With the American Indians it is manifested, even under the most difficult circumstances, as a great wheel of time in which the spirit of the individual is inexorably connected to a Great Enterprise(circle), that cannot be broken (Most & Grasberg, 1988). Many of the children I taught at the Sant Bani School are adults now. There is an unmistakable aura of confidence and sensitivity in them that has blossomed into service. And among all those children that I taught at the Waldorf School who are now my students at the college, I see the bright light of REASON in their eyes and the unmistakable quest for wisdom. There is no doubt in my mind after twenty years of teaching, that these are successful systems.

IV. PERSONAL REFLECTIONS

Early Teaching Experience

After twenty years of teaching, there are impressions that one develops regarding the effectiveness of his or her work. As stated in the introduction, my experiences in education are varied. I have taught at all levels, from 4th through 14th grades at public institutions, and have been involved both as teacher and administrator at a number of alternative schools. With this background of experience, it is possible for me to validly comment on how "ritual," as defined earlier, has or has not been a part of my personal teaching career.

It must be said from the outset that when I began teaching in 1973, I had no guiding philosophy, nor even an idea how important education would become to me. As much as this is true, I did, however, realize that what I myself wanted at that time, was some cohesive understanding of the cosmos and my role in it. This led me to construct my first class syllabus, which I developed with the notion that my students may enjoy the process of discovery with me. This endeavor resulted in the following syllabus for a class in Introductory Biology at our local community college in that year.

COURSE DESCRIPTION
BIOLOGY I

PURPOSE OF THE COURSE:

This course is designed to give the student of biology a strong and broad framework of knowledge in the field, which will allow him to continue his education in natural sciences with a thorough understanding of the concepts underlying life on the earth. In order to achieve this end, various aspects which influence life on the planet earth will also be investigated.

AREAS TO BE COVERED DURING THE FIRST SEMESTER:

The Universe - What it is, how large, cosmic theories.
The Galaxy - What it is, where we are, galactic evolution.
The Solar System - The sun and the earth.
Weather - Influence of our atmosphere of life cycles.
Water - Importance, cycles.
Continents - Minerals, movements, effects of continental drift on organisms.
Life in the Oceans - The food chain, survey of ocean life, Adaptive Morphology.
Fresh Water Biology - Local fauna (Lake and Rive), food chain, ecology of freshwater systems.
The Plant Kingdom - Importance of Earth's flora, transition, succession, Representative species, the plant body, cell structure, plant metabolism, photosynthesis, growth, genetics, communication, reproduction.
The Animal Kingdom - Survey of local fauna, overview of the kingdom

Distribution, gross anatomy and morphology, animal ecology, cells, reproduction, etc.
Parasitology - Animal relationships, local cases, diagnosis, prevention, etc.
The Algae - Overview, local
The Fungi - Overview, Medical, Mycology (Yeasts and Molds)
Microbiology - Bacteria, Rickettsia, virus, immunology, space

Basically, this is no different than hundreds of syllabi written for Biology One but for the first three subject headings. I did not know it at the time, but those introductory lectures, or at least the spirit behind them, would influence the essence of every class that I taught afterward. Without having contemplated the ultimate purpose of beginning this class with a description of "place" there was nevertheless an unconscious recognition within myself of the importance of this information to any understanding of the phenomenon of life. I subsequently found that this approach not only felt satisfying to me, but also received immediate vindication from my students. This was manifested by their sudden realization of the enormity of the space in which their "place" was found, and this compelled them to see the rest of the material as relevant to this much greater whole. This new awareness was displayed by their interest and enthusiasm for a greater understanding of all aspects of the world in which they lived.

It is important to note here that it was just as much a learning process on my part as on my students' part, and it is this that they perhaps felt allowed them to trust my intent (process) and me personally. As the process evolved, so also a reverence for the information began to emerge, again on both sides of the lectern. Here is perhaps the crux of the issue, that perhaps what we all hold in common is an intrinsic desire to see ourselves as part of some kind of whole, something powerful, something benevolent, yet tangible and definable. This is exactly what nature in its most primal state provides us, and which was, as described earlier, the foundation of all educational systems. It was and remains the process of understanding these things on more than just an academic level that sets primal peoples apart from us.

Evolution of a Philosophy

As stated earlier, it was some time before I recognized the force which was driving me, this desire to incorporate a universal foundation in all my courses regardless of the subject matter being taught. Very simply, it seemed natural and appropriate to include astronomy, physics and chemistry as fundamentals in all my presentations. As time went by, I found that students began to value this information and that it indeed broadened their perspective of the material being presented. By the time I had been teaching for two years, the foundation material had also grown to include some ecology, anthropology, archeology, and a substantial bit of ancient history.

As my course load became more varied, a greater and greater inter-relatedness of material began to emerge in my presentations. I was particularly fortunate in that I acquired a credential to teach both Natural Sciences and History. Eventually I taught courses in Biology, Chemistry, Anatomy, Physiology, Microbiology, Marine Biology, California History, Contemporary American History, and Russian History. I also became involved in the

development of a program for senior citizens which gave me an even broader scope of material, and which in turn became incorporated into future presentations. At the same time as this academic broadening was occurring and finding expression in my lectures, I was being drawn into confronting the very personal question about what all this interrelatedness meant to me. One thing was clear, that was my very real joy at simply seeing the extent of interrelatedness that all this information began to imply. Whether it was a rudimentary understanding of quantum physics, or the advances in plumbing conceived by 16th century Minoans , it all seemed so tangible, coherent, and exciting in its implications.

As this interrelatedness began to formalize itself into my personal teaching philosophy, I gave it greater expression in the classroom. Much to my delight, this information was well accepted by almost all of my students. My personal observation of their interest in understanding and appreciating the world in which they lived in, vindicated the approach entirely. I found that once I had established the concept of interrelatedness, the rest of the material fell into place as the semester went on.

What also became increasingly clear, was the fact that at the core of my students' personal academic quests, whether verbalized or not, was a desire to feel they belonged to a greater reality than that which they had come to accept. My quest became a search for the best way to convey the concept of a oneness, to these eager minds which were thirsting for some "place" in a world that appeared more and more alien and remote. Was there some common denominator which could be recognized by every student regardless of their personal and academic backgrounds, and regardless of the course being taught?

An Important Realization

It was at this point of self questioning that it occurred to me that what had indeed given my students their greatest stimulation and inspiration, was an understanding of their place in the physical world. Once this had been established, all the later academic information became considerably easier and more interesting to assimilate. Their relationship to the physical world, of course! How could they even begin to appreciate the wonder of their own "Great Enterprise" without knowing what the enterprise was? It was not necessary to imbue the physical world with spiritual superlatives, although those came naturally later, it was only necessary to explain the principles involved and to occasionally ask, "What do you think of that?"

The areas which I tapped for information regarding an explanation of "place" were primarily astronomy, physics, and chemistry. What was very convenient was that during the past twenty to thirty years these disciplines have been in the forefront of intellectual change. Due to this atmosphere of change, a number of very bright individuals were examining these fields from a new perspective: that of relevance. Not simply relevance for future employment, but relevance to the individual in helping him or her form a philosophy of action. I found to my great delight in 1989 that a friend who taught astronomy at Stanford had developed a reading list for his students that was almost identical to mine. The importance to me of that was a professional vindication of the direction my teaching was taking. These books included, The Tao of Physics (Capra, 1975), The Dancing Wu-Li Masters(Zukav, 1989), and *Stephen Hawking's Universe* (Boslough, 1985). Astronomy,

too, was being updated with works by Guy Murchie, *Music of the Spheres* (1967), William Kaufman, *Black Holes and Warped Space Time*(1979), and Freeman Dyson, *Disturbing the Universe*(1979). Chemistry, particularly at the biochemical level, was presented in a new context by Lynn Margulis, *Microcosmos*(1986) and Eric Chaison, Cosmic Dawn (1981). The list of authors could in fact fill a book themselves, all searching for the answer to the same question: What is the relevance of it all on a physical plane?

With information gleaned from these and many other works, my introduction to educational relevance began in earnest. As the years went by and my teaching load varied from the natural sciences to history, a series of introductory lectures based on this emerging awareness became a standard in all my classes. I discovered that an understanding of the physical world was indeed foundational in establishing the desire among my students to truly engage themselves in the process of education.

This commitment- to inspire my students on this path- I have taken very seriously. Once I had established the necessary trust, which may be the most important factor of all, the response was overwhelmingly positive. This includes students in classes as seemingly alien to an understanding of quantum physics as California history. The trust comes from their recognition that I, the teacher, am also engaged in the Great Enterprise, indeed, that everyone is. I would like to stress that this can only happen if both teacher and student are willing to open usually sealed doors of social structure. It cannot be faked! Later in this chapter I will present an outline of my process, and the basic information conveyed which, I believe, leads to the recognition of place mentioned above.

Current Experiences

Recently, I have had the opportunity to practice at an even more personal level this approach to teaching. Perhaps it is an indication of the earlier success of the method that has provided the opportunity. A number of parents, who are aware of my teaching approach, have entrusted their children to my tutoring on a one-to-one basis. That is, these students come to my home either weekly or bi-weekly for two hours of individual instruction. This is not in the form of tutoring for a specific class in which they are deficient (or their teacher is deficient), but for the purpose of inspiring and making the learning process relevant. With the implied freedom of method that this allows, I have focused on establishing an approach that is absolutely uninfluenced by anything other than the sharing of knowledge and its potential path to wisdom. It has nothing to do with "pearls of wisdom", but with a true acknowledgement on both sides of the value of sharing this Great Enterprise of life.

At the present time, there are six students, ranging from age ten to eighteen. All but one, the ten year old, have records of poor attendance, lack of attention, and overall intellectual malaise in the classroom. All are products, at least in part, of local alternative and public schools which were unable to fully engage their intellect. I have been asked to reawaken their inquisitiveness and encourage their will to learn.

I have found this to be a perfect arena for testing my hypothesis of relevancy through the understanding of one's place in the physical world. This is partially achieved by the physical environment in which we talk. The meetings take place in my personal study at my home, which houses a large number of books, along with maps, art work, atomic charts and a

variety of items collected over the years. I have found that this atmosphere encourages the imaginative processes and to a very real extent functions in the same way as the cave art of Lauscaux did to early teaching among the Cro-Magnon peoples. We converse about everything from astronomy to zoology and do not allow any limits on digression or intellectual tangents. As one might imagine, this results in a great degree of eclectic discourse. Most importantly, it has proven to instill in these boys a reverence for life and a desire to engage in the Great Enterprise.

To my very great satisfaction, this approach has proven extremely fruitful. The boys have been with me now from one and one half years to three months, and their interest in, and appreciation for their growing knowledge is clearly evident. This knowledge is being shared with their parents, from where a good deal of my feedback on the process comes from. They have also become aware of each other, and have begun dialogue between themselves outside my direct supervision. What is perhaps of greatest reward to me is their emerging ability to associate disparate pieces of information as belonging to one great story, "The Great Enterprise." And beyond that, it is becoming self evident that they are truly beginning to see all of history, science, literature as one rich mosaic of the awesome manifestation of physical energy. Not as a form of reality which denies the glory of life and mind, but as an added color to the universal landscape.

They are also beginning to comprehend the concept of a holographic universe, delineated by the mind of the avant garde thinker Michael Talbot in his book, *The Holographic Universe(*1991). One manifestation of their successful journey is their increased confidence in debating and often presenting complementary information which indicates their true understanding of the relationships we have discussed. An example of this was a session I had with my fifteen year old student. I asked him to point out on the world map where he thought the first cultures of antiquity might have arisen? I asked him to approach the question using his broadest knowledge base and to use that information to guide him logically to the answer. After a short period of internal organizing, and relieved by my encouragement that this was not a test, he began. He stated that since the Hominids seem to have arisen in only one locale, he would begin in central Africa. He correctly located Lake Turkana, and then using the logic we had discussed at an earlier time, he began a journey across the map, explaining all the while why each of his chosen locations would support a civilization. He successfully chose areas based on geography, climate(not missing ice ages), simplicity of subsistence and natural protection from enemies. I was delighted to inform him that he had chosen the sites of Egypt, Sumer, Crete, the Harripan of India, the forgotten cultures of the Mekong and the early dynastic centers of the Yangtze and Huang Ho rivers of China.

I have had similar experiences with the other boys in which there is strong vindication for the process. Recently two of the boys had gotten together to discuss a book they were both reading. They agreed that I too should read this particular book. One purchased it for me, and I found myself completely captivated. They told me their reason for giving it to me was because so much of what we had spoken about was implied in the book, and this made them enjoy it even more. The book was Robert Jordans' science fantasy, The Eye of the World (1991). The character in the book that they enthusiastically pointed out as me was one Thom Merrilin, a Gleeman. This is an individual who has traveled far, both

physically and intellectually, and uses this experience to tell stories of life. As one can imagine, I was honored.

One may at this point question whether this could be done in a classroom setting, rather than one-on-one. I have found, to my satisfaction, that it can. During the past spring semester I have used a basically similar process for my two college classes, Environmental Science (a natural) and California History. Recognizing the obvious time constraints, it is necessary to limit those introductory lectures mentioned before to only a few sessions, but at the college level the students are also able to comprehend more quickly, so it is equally effective.

Basic Format of Teaching

The process, as it stands now, is based on a series of lectures, discussions and recommended readings as follows:

Introductory lecture - An attempt to bond with the student by convincing them that the journey of the mind is shared and that its discoveries and rewards are great. Touch of Gatto's, "Great Enterprise." It is here that the teacher must convey not only enthusiasm but belief. Create the atmosphere of wonder and the realization that the universe is an exciting, unpredictable place and that it is, above all, an adventure. All of this, shared by every human who has ever lived. Convey the beauty, joy, and fantasy of it all. At the same time, indicate that knowledge brings wisdom, and with wisdom comes the satisfaction of service, so well described by Kirpal Singh (Singh, 1980). This cannot be done without genuine belief, but when it is, the response is unmistakable.

Series One - The big and small of things (from super-clusters to quarks). This can be done with great drama and staggering analogies. Developing a sense of physical place at astronomic and atomic levels.
Matter and energy, what are they? What does $E=MC^2$ imply? Describing the atomic chart as a palette of vibrations which when mixed can be used to paint a masterpiece.
Where does matter come from? Description of the "Big Bang, " galactic and stellar evolution. How the elements formed. The Quantum Foam Theory and the latest word on the world of quarks.
The four glues that hold matter together: gravity, electromagnetism, the nuclear force, and the weak force. What is a molecule? Convey the idea of infinite combinations and the energy signatures they imply.
Formation of the planet, plate tectonics, geo-physics. The earth as a living entity in its mineral cycles. Development of atmosphere and water.
Biochemistry, dynamics of proteins, carbohydrates, lipids, and nucleic acids. The importance of carbon. Simplicity with complexity.

Series Two - The cell, a master work of design. Logic behind it, organelles, cell physiology, importance of the membrane. Interdependence, yet capability of singular survival.
Cell organization into systems and a description of their anatomy and physiology (12 systems), Natural selection and speciation. The logic of it.
Detailed description of the activity of DNA and how that relates to the above.
Importance of enzymes.
The interrelatedness of all life on earth. Ecosystems, food chains. Population, resources, environmental degradation, and pollution.

Series Three - Paleontology, the emergence of the human species. The story of stones and bones. The human path of discovery of the world (Homo erectus). The life of hunter-gatherers. Beginning geography and its relationships to this movement. The Cro-Magnon. The agricultural revolution, its causes and consequences. Social changes engendered by the sedentary life. Locations of the first high civilizations. Why? Early interactions.

Series Four - Geography and its relationship to the cultures found there. A step by step review of the continents, their environment and their early peoples.
Minerals, soils and other resources, as well as weather and water which influenced the history of these cultures.
Evolution of these cultures to where they are now. What is happening there today? (how the mighty have fallen) How weather and resource degradation affected change.

Series Five - The age of exploration. What did it really mean? America B.C. The science of navigation.

Series Six - The industrial revolution and its consequences: social, political, military, and environmental.

Series Seven - The future, through the eyes of science fiction and fact. Virtual reality, extraterrestrial intelligence, planetary colonization, and on.

Although this represents the form of the lectures, a great deal more is covered and information from one area is often related to another; indeed, that is the point. It is not so much a "lecture" in the classic academic sense that is of value, but the communication of love and support for the journey that can only be conveyed by a traveler. All the while, each piece of information is made relevant by encouraging the student to recognize the fact that this is his, her, our story - it is the Great Enterprise. I emphasize once again, that it is in that first series of lectures that the inspiration is imparted to the individual, and that depends on their recognizing their place in the physical world. Not just as an accidental chemistry, but as a chemistry rich with "spirit, " and that this spirit is shared by all things, abiotic as well as biotic. This cannot be achieved without the knowledge of "place" within the cosmos. Both in the astronomical sense and the quantum sense. This can be incorporated through discussions on stellar evolution, atomic theory and universal spiritual concepts. It is the integration of information from these and other areas that allow the student to begin the journey to wisdom.

This message is becoming more and more important in my presentations, whether to children, young adults, or seniors. It is my belief that this is essential to the issue of what direction education today must take to become once again relevant.

Vindication of the Format

In reflecting upon how and why the process I have presented has become so important to me, there are two things that stand out. In regard to the how, it is a result of the continued response of my students and in particular their insatiable quest for truth, that continues to influence my own search in the direction it is going. That direction being one of a fundamental desire on the part of myself and my students, to have some idea of our place and what the relevancy of it all is anyway.

In regard to the why of the process, it is clear to me that my role as a teacher demands that I continue to broaden my perspectives and in so doing, offer my students the one gift I truly have to give—my love of knowledge.

V. NATURAL BENEFITS

CHEMISTRY AND THE MIND

Beyond purely intellectual or philosophical considerations of the value of ritual in education, particularly in the recognition of a relationship to nature, is the question as to whether or not there is a physiochemical connection that is also at work here. Specifically, is there inherent in the chemistry of the human, some process, which mediates either the quest for or retention of knowledge (Roszak, 1993, pp.59-80)? If so, does ritual, a solemn rite used to impart sacred concepts, affect this chemical process, and in particular, enhance it? Is ritual a form of action which induces a state of mental openness, not necessarily experienced during mental functioning which is purely survival oriented(Edelman, 1992)? Such action may consist of any number of different forms, from dance and song, to shared spiritual vision and learning.

I believe this last form is most pertinent to the issue at hand. Primarily because, although dance and song, as well as similar physically active forms, could be included in educational processes today, they would not be easily adopted by the present system, or for that matter by the students in our present system. This does not imply that these forms are not valuable, or could not be included in some way, but it might prove difficult, at least at first.

This then, raises the initial question as to whether mental processes, like a shared spiritual vision (learning), indeed have any effect on the physiochemistry of the human species. Whereas this question may have elicited a fair amount of derision ten years ago, that is no longer the case today (Allegro, 1971 & Lilly, 1977). In fact, there is an entire new discipline which is rapidly gaining adherents; it has the illustrious title of Psychoneuroimmunology. This very new and recognizably invaluable field of study, has a potential far beyond the fantasies of most individuals, whether professionals or lay people.

Its basis is the belief that many of the physical/chemical manifestations of a variety of disease states are at least partially controllable by mental processes. In this specific area, the interest is focussed on the body's immune system which of course, is the system implicated most often in the body's ability to resist the disease state. The recognition of the connection between mind and body in this all important area of disease control has been adapted to everything from slowing heartbeats to increasing white blood cell counts (Pearce, 1992).

It is perhaps important to note that this idea, of mind over matter, is not a new one. The history of science and philosophy abounds with individuals who have, over the millennia, suggested this connection (Sarton, 1952). It is also interesting and important to note, that it has been the primal peoples of the world who have consistently maintained an understanding of this concept and effectively used it for both healing and instruction. Again, we ask, is there some inducible chemical pathway that will enhance the learning process?

If we turn again to indigenous peoples, we see that their knowledge of the benefit of ritualized learning, whether through chant, meditation, or dance, is crucial to the perpetuation of the wisdom of the tribe or clan. This does not imply that they are aware of the actual physiochemistry involved, but only that they recognize the value of inspiration and stimulation in assuring the passing of tribal knowledge. This is really no

different than later Druid priests memorizing Celtic history through the oral and often dramatic rendering of their T'ains (mythical stories). These priests were said to have entered an "altered state" as they rendered their material, and it was said that this was able to draw the audience into such an altered state (Herm, 1975).

Recent work in neurochemistry has clearly shown that there is a qualitative as well as quantitative change in brain chemistry under such conditions (Harner, 1980). These conditions varying from individual revelation to combined group consciousness.

A similar process (neuro-chemical change) has been observed in various societies from North Central Siberia to Tierra del Fuego at the tip of South America (Levin, 1963). It is to be acknowledged, that in almost all cases, this heightened form of learning has at its basis, an attempt to engage the individual (student) in the understanding of their place within the greater scheme of things. It has also been noted that this heightened awareness or ability to absorb information is possibly due to the release of specific neurochemicals which are most often expressed when an individual is in a state of oneness with nature (Prigogine & Stengers, 1984 & McKenna, 1992).

Although the current research is not yet universally excepted, it is nonetheless indicating a greater and greater role of chemicals influencing our behavior. Much of the most important work is being conducted by individuals outside academia working among the worlds few remaining primal peoples (Wolf, 1991). This state of oneness and its concomitant expression in neurochemical release has been recognized over the ages and continues to be experienced today as a state of bliss. This can be experienced as profoundly by a contented fly fisherman, as a supplicant monk. In both cases, the chemical process is similar.

It has been just recently discovered, that these neurochemical changes can be elicited by a number of stimuli, yet they are all related in the sense that they influence a common chemical process, which enhances ones' perception of time and space, and particularly, ones own place, in the cosmos. Recent research at Stanford University has shown us that Shamanic drumming has a universality that is physically definable in terms of resonance and frequency, and that this is common to all Shamanic drumming (Hart & Lieberman, 1991). The research has also shown us that the drumming has a very real neurochemical consequence which alters the listeners' perceptions, and that these perceptions are of a higher order than normal intellectual focus can achieve. This research has vindicated the more personal approach of Mickey Hart and his "Planet Drum" project mentioned earlier. In this most wonderful introduction to drumming throughout the world, Hart begins his treatise with the words, "First there was the sound."

Sound, of course, is not the only vehicle for altering the neurochemistry of the brain. Movement is equally influential in eliciting these changes. Whether it is the ethereal movements of Eurethmy of Rudolf Steiner, or the earthly pounding of the feet during the Native American Circle Dance, the ultimate consequence is the same. Namely, a recognition of the oneness of our earthly experience. It has been long recognized that communal celebration has a reinforcing influence upon the spiritual experience of just one isolated individual. The movement of the body in a group automatically centers that group in space and time, and this establishes a contact with the Earth which is both physical and spiritual. Anyone who has practiced even the subtlest forms of Sufi Dancing must recognize its purpose and consequence in this regard. In this ancient form of dance the

steps are simple, but the repetition of them induces a state of physical centerdness which translates into a state of mental bliss. And lest we forget yet another form of motion in dance that transported the dancer and observer too, consider Gene Kelly and Fred Astaire. Though there is a qualitative and quantitative difference in the experience of the participant and observer, there is an indisputable transcendence from the ordinary that takes place, and this is also definable chemically. In all these cases, what is occurring at the individual level, is an assimilation into a recognizable, eternal process of belonging to a community, a planet, a solar system, a universe.

One of the most interesting aspects here is the correlation between levels of neurochemical activity and natural chemical communication within the biosphere (Tompkins, 1972 & Roads, 1987). We find, indeed, that the release of awareness enhancing neurochemicals during these states of altered consciousness are not simply momentary glimpses of a greater oneness, but represent a constant flow of communicator chemicals within the biosphere. What were once thought of as a large category of fourth generation or "waste" chemicals, are now recognized as the very vocabulary of natures' language. Our modern culture has effectively denied this connection , partially as a result of the Renaissance. It was during that period that anything associated with nature was seen as a manifestation of Pagan forces. This was dealt with by the powers that be (principally by some who claimed an allegiance to a Judeo-Christian dogma) with a concerted campaign to eliminate all traces of mans' ancient connections with the Earth. Through intimidation and torture, they were enormously successful. The end result was a Western European philosophy which allowed for the full scale destruction of the environment and the callous destruction of indigenous peoples throughout the world.

Changing Perceptions

However, in the research laboratories of science, the ancient, esoteric knowledge is emerging, and is weakening the mindset generated during the Renaissance. This is not a malicious effort to tear a system down, but a consequence of research in all fields that clearly tie us to the Earth in the manner recognized by ancient peoples before the One God. This research indicates that the interconnection between our development as a sentient being, and the chemical evolution of our brain can be delineated and guide us in that most important endeavor; the education of our youth. Once again, through the learning process, the Great Enterprise can be directly related as a ritual.

In order to fully understand this dynamic of learning as being as much a chemical process as a psychological one, we must first understand some basics of chemistry and our human specie's presence as a chemical entity.

We are first of all, stardust. That is, we are composed of various combinations of atoms which were born in the internal dynamics of stars. Regardless of which of the 92 elements we look at, each one, excluding only hydrogen, had its birth within these cosmic crucibles. All matter, whether animate or inanimate, is composed today of those elements (Beaty, O'Leary & Chaikin, 1981).

The entire biosphere of the Earth is one great chemical interaction. This interaction has been and will always continue to be, reaching for a balance in the flow of energy and matter within it. This attempt at balance is a continually shifting and changing enterprise, as James Lovelocks' Gaia concept implies (Myers, 1984). Simply put, the Earth in its

entirety is in a dynamic steady state condition in which its various elements must constantly readjust to chemical changes induced by the Universal path towards balance described by Einstein's E=MC2. It requires a constant 'learning' which allows for adaptation to a constantly changing environment. This process is manifested in every aspect of our planetary existence from the physical effects due to our orbit around the sun to the genetic adaptations mediated by the process of natural selection.

Even our very thoughts and patterns of behavior are mediated by chemical changes within our body. This occurs most specifically in the neurons of the Central Nervous System. Our success as a species has been a natural consequence of our internal chemistry attempting to "balance" with the external chemistry of our constantly changing environment. Success in nature has very clear parameters. To be able to reproduce and metabolize are the two essentials. These are both undeniably chemical processes and must be able to adapt to the chemical changes occurring around us.

We are unique, however, in that the physiological development of our brain has given us an additional capacity for learning for reasons beyond simple physical survival. Yet, this too is a chemical phenomenon. This unique chemical activity of our brain has developed over hundreds of thousands of years to recognize and take advantage of, various external stimuli that initiate or enhance the "learning" process. That learning, though of a transcendent nature, still attempts to adapt to the constant chemical balancing act engendered by our environment. The ultimate lessons that these internal chemical processes are geared to acknowledge are those that are most crucial to our species survival, which, in turn, are directed toward an understanding of our place in the biosphere.

Certain very clear stimuli, both chemical and physical, induce those internal chemical processes that enhance learning. It is the arcane knowledge held by indigenous peoples, regarding their recognition of the above, that they have maintained through ritual practices. We are once again, back to Mickey Hart's, "first sound," the Australian Aboriginal "Walkabout," the "Circle Dance" of the Native Americans, and so on. We are also in the laboratories of academic institutions where contemporary research is showing us very clearly that, indeed, various vehicles are used in a ritual process, whether chanting, dancing, or imbibing and ingesting. These vehicles induce chemical changes that are now seen to be most often in the category of euphorics and the mind altering psychedelics (Fackelman, 1993).

Relationship to Current Teaching

It is important, once again, to see that almost all of these rituals have in common the initiation of a feeling of oneness and belonging. When we acknowledge that the oneness exists, both ethereally and chemically, and that recognizing it in itself initiates enhanced learning, we can adapt these processes to modern education. It is very simply, a function of our present reality and within the space-time that we occupy today. That is to say, that we are as much today, a species which desires for both ethereal and survival reasons to feel the oneness of our universe and have an assurance that we belong within it as strongly as we have been in ages past. Nature provides us with the immediate gift of revelation, chemically and soulfully, whenever we engage in the ritual of learning as a path to understanding our place in the universe. By presenting the truth of physical reality to our children, we support nature's own prime directive of survival.

VI. PRACTICAL BENEFITS

IMPORTANCE

If we are to accept the idea that it is through the recognition of a physical oneness shared by all of us that is at the basis of an appreciation of the Great Enterprise, then are there arguments for its inclusion in the educational system for purely practical reasons? That is to say, are there any socially functional benefits derived from an educational system based on such an esoteric concept? Furthermore, does the concept allow for inclusion in the educational system in a form which results in tangible economic and cultural benefits, while still maintaining a transcendent purpose such as service to humankind?

For the hard core institutionalist, one who needs a clearly defined, tangible product from a process, the acquiring of wisdom would hardly satisfy that demand. We live in a world, perhaps unfortunately, of institutionalists, and our present social system is almost exclusively controlled by them. Therefore, in order for a new system of education to be adopted, there must be a usable product at the end of the process. This product must be more than philosophical. It must indeed, be tangible and show results. It must somehow "touch" the inner soul of those individuals on the level of Gary Zukavs' "ideas" (Zukav, 1989); yet, not alienate them in a way that prevents the process from being implemented.

WHERE FOUND

Fortunately, there is a very simply definable and tangible reason for adopting a system based on the concept of physical oneness. One need not conjure up synthetic arguments; all that is necessary is for one to recognize some basic facts. The most important of these facts is that we, as a species, are part of an elaborate interconnected web of life upon this planet. The planet itself is a living entity, not in some prosaic sense, but in a clearly biological and chemical sense. The classic biological definition for life is that it must be able to reproduce itself and it must be able to metabolize. The planet is clearly reproducing itself by the alchemy of its abiotic and biotic cycles. Can we really claim that the planet is reproducing? We can, because in the time frames of the earths billions of years all things will be reborn. Even elements, will be transformed from one to another, to say nothing of the turmoil within the Earth's center, as so recently described by geophysicists (Petit, 1987). In cellular division, the product is a new cell which will have its one hundred twenty or so divisions before death, and this cell is indistinguishable from its parent; and so the earth, as it goes through its inexorable cycles, is reborn into yet another phase of its life, but never losing its identity as the Earth.

In regard to metabolism, what is more clearly analogous to the constant chemical activity within a cell than the interactions between plant and animal organisms within the ecosystems of the earth? Although James Lovelock, the author of the Gaia Hypothesis (Myers, 1960), is considered by many as the contemporary father of the "Earth is Alive" philosophy, a great many others have contributed to this recent, yet in many ways, ancient concept of our planet's dynamic life. During the 1960's, one of our greatest naturalists, Loren Eiseley, influenced an entire generation of student biologists to adopt this idea. Doctor Eiseley was a professor of Anthropology and the History of Science at the

University of Pennsylvania. His books, *The Firmament of Time* and *The Immense Journey* (Eiseley,1957 & Eiseley,1968) were seminal in establishing an approach to the earth which had been missing in Western consciousness since before the Renaissance.

This approach has been supported by work from a number of others. Perhaps one of the most eloquent is that of Louise B.Young . A trained physicist, she has traveled the world's continents and her books reflect the image of an interconnected entity which can be seen as truly a living thing. As she states in the last chapter of her book, *The Blue Planet,* "born of stardust, this handful of matter has evolved throughout the eons of geologic time. Like a butterfly taking shape within its chrysalis, the parts have rearranged themselves, taking on new forms" (Young, 1983, p.266). She speaks of the "membrane" of atmosphere and contemplates the role of the human in this organism, a question that has stimulated our intellect since the dawn of time. Although it may be satisfying to see ourselves as the "mind" of this organism, and therefore in a superior role, it is essential that we remember also our very real influence within the Earth's physical realm due to our unique power to change the physical well being of the entire organism . It is here that education has been to a great extent most wanting, and it is here that the ancient, yet still existing (the American Indian and the Australian Aborigines)foundations of wisdom and harmony lie. It is the understanding of the organism and our part in its life that I have referred to earlier as the Great Enterprise. The question is: does this understanding have a practical application? Does making it, or perceiving it, have any value to those who need to see "results"?

If the Earth is a living organism, then it too, as any other living thing, must keep its systems in a state of healthy balance in order to insure its survival. The survival of the planet then, is dependent on the healthy balance of its systems and can be visualized as analogous to the human body itself. That is, in order for the human body to fulfill its functions, one of which is intellectual awareness, its systems, such as nervous, circulatory, respiratory, excretory, and so on, must each be maintained or the entire organism fails. If the systems break down, and the organism fails to survive, no part of it will be spared this end.

In much the same way, if the planetary systems are not kept in balance, then the totality of the life force, which the planet represents, will also begin to fail. What is of course critically important for the powers that be to understand is that those systems which need to be in a healthy state are those that provide the very raw materials that insure the economic livelihood of the entire world market. And, when these patterns are disrupted, either by over demand or abuse, then the very foundation of this livelihood will be threatened (Pyle, 1974).

What is of equal importance is that we have a limitless future as a species, one that is unparalleled in its potential. If we are to realize this potential, we must conserve those resources which will be necessary to physically produce the technology which we will need to achieve that potential. Whether this is in the realm of appropriate technology or colonization of space, the continued use of the resources of the earth will be necessary (Gore, 1992). I include in these resources the human being themselves and their internal physical as well as mental harmony.

This brings up a second, very practical reason for educating our youth in such a way as to emphasize and explore their part in the overall organism. That is, without an appreciation, scientifically supported, of their individual health being directly related to the

health of the entire organism, the biosphere, future generations will continue to perpetuate the destruction through overpopulation, pollution, and environmental degradation of that system which has already put us in the position we are in today. It is no secret that we have created a planetary disaster in the form of environmental disharmony. This disharmony, interestingly enough, can be traced to attitudes generated during the Renaissance as mentioned earlier and to be addressed in greater detail in the discussion. Suffice it to say that during this period the Western Europeans developed the philosophy which allowed them to look upon the natural world as threatening and in demand of control.

It is clear that one of the most important benefits of an environmental or nature oriented educational focus is that it will stop the perpetuation of abuse which has put us in the present situation.

G. Tyler Miller makes a strong case, in an admirably subtle way, in his textbook, Living in the Environment (Miller, 1992). In his introduction, Miller suggests four levels of human awareness that relate to the environment. The first is awareness of pollution and environmental degradation, followed by awareness of consumption overpopulation, the dynamics of a "Spaceship Earth" mentality, and finally, a "sustainable Earth" level of awareness. Each has their place, but Miller suggests that it is only at the sustainable Earth level of awareness that things can be remedied. As he states in this section, "The first three levels of understanding are humancentered views, in which we shape the world to meet our needs. They do not recognize that the solution to our problems lies in giving up our destructive fantasies of omnipotence. Instead we must develop an Earthcentered or lifecentered worldview"(Miller, 1992, p.8) . The textbook goes a long way in accomplishing the task of creating such an awareness. Unfortunately, it is geared toward the college level, which excludes a majority of the individuals who are in most need of such a perspective, specifically, grade school and high school individuals.

An Additional Reason

It is perhaps worthwhile to include one more very important and practical benefit of a biospheric focus. That is, in first recognizing a tragic loss of inspiration, imagination, and simple joy within our youth. Granted that these are elements of life which are not so easily quantified, and perhaps technically outside the realm of a "tangible product," but they do directly affect the health of a community, and it is communities, that make up a biosphere. There is simply no adequate philosophy or religion that can generate the intrinsic recognition of oneness and belonging (which can, and most often does, manifest in creativity), except through an appreciation of the life force in all its complexity and beauty. Throughout history it has been this awareness of the mysteries of the universe and the life force that have inspired, encouraged imagination and given joy. And this can only be realized if one understands those foundational aspects of reality described by the physical sciences. This is not to imply that knowledge provided by other disciplines is less important, only that in order to truly be aware of the concrete reality of oneness, an individual must be familiar with certain physical principals. If it is then practicality and a tangible product that we are concerned about, then in many ways this last benefit of an inspired, creative youth, that is secure in their place in the cosmos, may turn out to be most important of all (Fox, 1990). Joseph Chilton Pearce, an individual of exceptional

sensitivity an intellect, believes that if we do not recognize the need to shift our consciousness in regard to the education of our children, it will usher in evolutions end (Pearce, 1992).

VII. IDEAS IN EDUCATION: PAST & PRESENT

Description of Chapter

In this chapter, I present a brief historical perspective of change in education. I focus on that period after the turn of the twentieth century because it has been since then that our educational system has been most carefully scrutinized and radical ideas proposed. This does not imply that innovative concepts were not introduced earlier, only that the period since then has been the most dramatic in addressing change.

In the second part of the chapter I present the results of a survey I conducted among a number of my colleagues, in which I attempted to determine whether the level of change that I am suggesting, could be accepted by them as teachers, and then implemented by our present educational institutions?

Early History of Educational Reform

There has been a good deal of work done in educational research and reform since our early Puritan models; yet, it is rare to find any substantial focus on ritual in the development of these reforms or models. What is interesting, albeit ironic, is that many educational reformers alluded to innate desires for ritual and even acknowledged them, but failed to go the extra needed step to see the final implication.

Alfred North Whitehead stated in 1929 that it was necessary, especially at the beginning of one's education, for an individual to understand the information being related as being shared by all on a level of "Romantic Cognition" (Whitehead, 1929). Whitehead believed that the first order of education, was to begin the setting in order of a "ferment already stirring in the mind," and that this depended on the joy of transition from the bare facts (size of the universe, life force, sunshine) to the "first realizations of the import of their unexplored relationships (Whitehead, 1929, p.38) In order for the next stage of education, "Precision", to occur, Whitehead indicated that although these relationships explored in the previous period could be subordinated to the exactness of formulation, this stage would be"barren" without the foundational stage of romance. What is more romantic than the ritual and ceremony surrounding one's first recognition of being a player in the drama of life? Again, the Great Enterprise? In a similar vein John Dewey made a strong case for the importance of physical activity in the first educational experiences of a child (Ratner, 1939). He showed that a child's earliest development hinges upon his or her physical relationship to the immediate environment. This occurs even before any formal schooling begins and is fundamental in the quality of physical, mental, and intellectual growth of the child. This physical activity relates directly to the experience of learning. When a child enters school, that interaction is dissolved and is shifted to unrelated physical activity, such as organized sports. This is not to imply that organized sports are not valuable, but they do not fulfill the need for continued physical relevance to one's conception of his or her place in space and time. This is satisfied among indigenous peoples by the incorporation of dance, song, and story telling, which continually reinforce the physical presence of one in an ever-changing world. As long as the thread continues to exist through these ritual processes, the individual feels the constancy of their existence.

Dewey went on to contemplate the religious factor in the learning process and recognized its place of importance therein. His focus was on the arguments between various religious factions and their individual perceptions, but he did not address the issue of an underlying spirituality that was nature related and that was the common denominator of them all (McDermott, !973). He comes very close however, in his essay on "Experience and Nature" to expressing the notion that there is something inherent in the learning process which is augmented by the acknowledgement that all things are one way or the other related to the natural world outside ourselves, yet which we are also an integral part of.

It is ironic, but typically so, that much of Dewey's work was not recognized for its implications even years after his death, and during those soul searching years of the sixties, when his ideas would have been expected to generate a revolution in educational direction. Selections from Dewey's essays were presented by Martin S. Dworkin (Dworkin, 1959), which clearly enunciated basic principles of learning that one would expect should have been enthusiastically embraced by the educational elite at that time. In one of his essays from that work, "My Pedagogic Creed," Dewey states that education as a whole is "a process of living and not a preparation for future living" (1959, p.22) In the same essay he goes on to say, "...that the true center of correlation on the school subjects is not science, nor literature, nor history, nor geography, but the child's own social activities" (1959, p.25) The step, apparently not taken by Dewey at this point, was the recognition that this social life, which he saw as of great importance, was exactly what is addressed so successfully by indigenous peoples and indeed by anyone/system that acknowledges the child's (student's) place within the matrix of the cosmos. Instead, he saw it best satisfied through the addition of cooking, sewing, manual arts instruction, and so on, within school curriculums. Dewey always comes so close to this realization, as when he states in his essay on the school and society that "the imagination is the medium in which the child lives" (1959, p.69). In this essay Dewey is once again just short of describing the function of ritual and ceremony as a myth-building, imagination stretching process that is absolutely fundamental in the pursuit of wisdom. He best sums up his philosophy by stating that if one relates the school to life, then all studies by necessity will be correlated.

Dewey's work may not have had the enormous influence that it could have had; nevertheless, we should grant that his influence was substantial and his ideas, and those of others during his time helped encourage a reform movement in education during the Sixties. It stemmed primarily from the demand for relevant instruction by university students during this period, and it was further encouraged by later educators who were, at least to some degree, influenced by Dewey.

One of the issues that was addressed during this time was whether university curriculums had kept pace with the overwhelming amount of new information that was accumulating (Martorana, 1975). A 1968 study by the Institute for Higher Education quantified the percent of course reform at 119 institutions of higher learning in the United States (Lon Hefferlin, 1969). It is interesting to note, and relevant to this dissertation, that physics and astronomy departments showed the lowest percent of reform, second only to geology. I point this out as significant because these disciplines had gone through an enormous change in "relevance" to the everyday world. In the case of physics, particularly quantum physics, it had become clear to an elite few that the world, as seen through our eyes, was

not necessarily the world as it really is. Within astronomy, our international success in venturing into space had also made the cosmos a much more personal place–to say nothing of plate tectonics and the consequential recognition of the creative/destructive forces beneath our feet. These are the very heart of the first learning that early ritual and ceremony, whether among indigenous people or young Waldorf students today, convey to the student. And it delivers that learning through techniques that we now recognize influence the very chemistry and sub-atomic structure of the brain itself. This connection will be explored later. As before with Dewey's work, the reform focus apparently did not include the implications of this knowledge, and how it could be incorporated into existing systems.

Reform After the Fifties

The Sixties did see a number of studies and experiments in higher education. A number of universities attempting to establish a community identity within the college structure introduced innovative plans both physical and philosophical (Martin, 1969). Still, there was little, if no, attention paid to the possibility that there may be something more basic at issue.

A large volume of essays, sponsored by the Carnegie Commission on Higher Education and published in 1973, addressed the difficulties in educational structure and reform at seventeen institutions of higher learning (Riesman & Stadtman, 1973). Not one of the essays addressed the issue of the possible implication of lack of "spirit" within the educational process. That is, they failed to consider "spirit," not in any religious sense but in a cosmological sense

Today, the focus of educational reform in the public sector is on issues 180 degrees from the recognition of the need for cosmological perspectives within the educational process. Emphasis is most often upon competition in world markets or jobs. Deputy Secretary of Education David Kearns wrote, in his book, Winning the Brain Race, "We cannot have a world class economy with dropout rates that average 25%. Tomorrow's work force must be better educated than ever before" (from Kovnat, 1992, p3-9).

The lay public is brought into the issue through articles appearing in local papers and popular magazines which ask the question, "What's wrong with our schools" (Clement, 1993, p.4-5)? The focus of inquiry is generally in the realm of material success, prayer, safety, and sex. In the May 9 issue of Parade Magazine the title of the article on education was, "What's a good grade worth" (Fennessey, 1993, p.6)? The article describes various programs, such as Scholarship in Escrow that reward students monetarily for getting good grades. The money is donated by business and community groups.

The scientific community has another concern and approach. In this case, the concern is over the very real threat of a brain gap between children in American schools and those in Asian schools, particularly Japan. One of the more popular remedies is to restructure our educational system more along Asian lines (Stevenson, 1992, p.70). Although there have been a number of interesting and truly sensitive observations made, many of which would undoubtedly benefit our system, there was again little mention of the inherent need for some form of ritual in the process. A case in point would be the demand for discipline and respect between teacher and pupil that is encouraged in Asian schools. This does not refer to the discipline and respect engendered by avoidance of punishment, but that engendered

by reverence for each others being. This has been found to be integral in the passage of knowledge among indigenous peoples also. Unfortunately, the demand in Asian schools, and clearly in western schools is not founded on the same basis as among indigenous peoples, that being a recognition of the import of the information to a higher order of being. Perhaps Stephen Schneider, recent recipient of a MacArthur Grant, sums up at least one very substantial reason for our inability to truly change the system. He wrote in *World Monitor*, "I think that the U.S. education system overall, is set up, to package information, and to process people, to be plastic cogs in the economic engine.... and the Japanese system makes titanium parts for its economic Juggernaut" (Schneider, 1993, p.31). He concludes with the statement, "A fundamental change is needed from product and facts, to a creative, questioning, learning process" (1993, p.31).

What is somewhat disappointing is that Schneiders' evaluation of the ultimate consequences of this highpowered "cog in the wheel" approach are heeded by only a minority of educators and the institutions that hire them. Even less heard are those individuals who have also observed the educational situation, but find few literary or other avenues for expounding their ideas. Certainly the articles appearing in the *Holistic Education Review* during the 1980's were filled with invaluable insights and ideas regarding new educational processes. One of those articles described the philosophy of Neo-humanism proposed by the Indian philosopher "Prabh'at Rainjan Sark'ar (Hatley, 1988, p.12). This philosophy closely resembles that of "Deep Ecology" first articulated by the Norwegian philosopher Arne Naess. At its base, it has five principles:

1. All living things are connected with each other, and their environment. (Gives rise to networking modes of thinking)

2. Biological Egalitarianism (Social equality)

3. Resources are limited, and can be rendered useless, even before they are depleted. (Develops concepts of voluntary simplicity and controls on technological development.)

4. Long-term sustainability of an ecosystem is dependent on a broad range of species and resources. (Emphasizes the importance of a broad-based economy and multi-culturism)

5. Suitable communities should rely on local resources, rather than importing them, and should recycle those resources, rather than exporting them as waste products. (Gives rise to a whole range of social management policies such as bio-regions or economic units.)

With these principles as an educational base, a highly integrated, cooperative, learning process can be achieved. A number of variations on this theme have been part of the educational underground for a decade. Only recently has a program become powerful enough in its presentation and implication as the G.A.T.E. Program (Global Alliance for the Transformation of Education). This is a world wide network of global/holistic educators who are committed to educational change which incorporates the concept of

"soul centered" learning. At its core is the recognition of the need for an individual's internal being to be engaged in the educational process. What is of concern is that, just as a program such as G.A.T.E. is being initiated, a very strong concurrent push is on to incorporate more television into the classroom and concomitantly to lessen even more any personal exchange between "wisdomkeeper" and student (Meadows, 1993, p.5). This is not to imply that the video tool cannot be effectively used-it simply has great potential for harm.

The history of educational reform is extensive, and there have certainly been episodes when genuine progress has been made; yet, we find ourselves now at a time of change that necessitates an even greater evaluation of our teaching methods than ever before.

Through the opportunity provided by the writing of this dissertation I have attempted to express what I have learned during twenty years of teaching. As indicated in earlier chapters, the beginnings of a teaching philosophy for me included from the outset, the idea of incorporating a degree of metaphysics (the study of the nature of the Universe) into all my instruction. Over the years, that initial seed philosophy began developing connections with new information made available by a constantly broadening interest in the nature of reality. This, in turn, has encouraged me to articulate these interconnections within the context of educational change. I was interested in determining to some degree, the feelings of my colleagues in regard to the concepts so far introduced in this dissertation. I therefore developed a survey that would "test the waters".

Design of Survey

If one designed an educational curriculum which had the student's relationship to the environment as its focus, for the reasons addressed earlier, then it would seem important to determine, or at the least, to get a feel for how educators themselves would react to this idea. With this in mind, I prepared a simple questionnaire which I sent to teachers and administrators at various levels of public education. They are simple questions, but are at the heart of the issue. Does our contemporary public school system have individuals who relate to the idea of education as ritual, and would they be interested or think it valuable to generate ritual within the context of their work?

The individuals were chosen to represent a wide variety of educational levels and interests. Some were teachers, others administrators, and yet others are educators, but not necessarily within a classroom context. Their responses, and my interpretation of what they might signify, are the gist of the second part of this chapter. I have included a historical review of previous changes in educational concepts that are pertinent to the situation today. The responses have been at times edited for the sake of expediency due to their length or redundancy. A cover letter was sent indicating simply that these questions I was asking were a part of my doctoral dissertation, and their cooperation would be appreciated. I did suggest that they look beyond matriculation/graduation as manifestations of the ritual which I was interested in. The question of how they envisioned ritual in education, with only a minimal definition by myself, was in itself extremely informative. My definition which was included in the cover letter, was, "a sacred rite for the purpose of imparting universal and solemn beliefs and information." Although this appears perhaps somewhat vague, it was important not to "lead the witness". Indeed, simply their response in terms of their interpretation of this definition was relevant to the survey as mentioned above.

The questions I asked were these:

1. As an educator, what would be the most valuable, long-lasting lesson or concept that you could impart to your students, young or old?

2. Do you see within the process of education an inherent ritual (beyond matriculation/graduation) that could be conceived as universal, and perhaps even sacred? Please define it.

3. Do you believe that our present educational system encourages the adoption of such a viewpoint? Please elaborate.

4. Would/Would it not be beneficial to incorporate such a viewpoint into our educational process?

5. If it were up to you, what would be the underlying concept that this ritual process would use to inspire students?

What I was most interested in seeing was whether there was a common denominator in the responses, and whether this supported the idea that incorporating ritual, as acknowledgement of the Great Enterprise of "living," could be a basis for educational design?

The survey that I conducted was designed to illicit from a number of people (fifty were contacted) within the educational community a response to some of the basic tenets I had adopted in my teaching, and that were an outcome of my personal evolution as a teacher. I formulated my questions in such a way so that the respondent was given basic direction, but also a degree of latitude to encourage reflection. I wanted to gauge the level of acknowledgement of what ritual was, and whether the individuals contacted felt a personal or professional interest in incorporating ritual into academia.

I chose my respondents with the intention of acquiring as broad a sample as possible. I did this by contacting individuals who either directly or indirectly were associated with the passage of knowledge. This included teachers at levels extending from grammar school to graduate school, as well as authors, social scientists, administrators and students. A total of fifty letters were sent and thirty four were returned with comments. The following is a presentation and preliminary analysis of what they said.

Survey Results

The first question on the survey is: *As an educator what would be the most valuable, long-lasting lesson or concept, that you could impart to your students, young or old?*

Four individuals of the thirty-four surveyed, answered in a context outside of the realm of academics. Not surprisingly, they are published authors whose books have been referenced in various parts of this dissertation. They did not consider themselves "educators," but did relate to the idea that they were "teachers." One of those was, however, an educator, who had retired and is presently involved in the G.A.T.E. program. Each of these people replied to the first question by giving examples that were closely identifiable with those I have mentioned earlier in the dissertation. This was particularly

the case regarding one's place in the cosmos, the interconnectedness of all things, and the recognition of these beliefs as being fundamental to an individual's development as an intellectual being.

As one of those individuals stated, "Be yourself, give of yourself, and see us all as interrelated."

Another said, "The notion that there are many possible realities; the concept that we build our values upon mythologies which we enact as rituals; secular and sacred."

...And perhaps most simply but eloquently put by another, "Everything is sacred, even with scientific explainings, we still live in a universe of wonder; we are a miracle. Everything we feel is charged with the same stuff. We must find right relationship within it. All things come from that."

In one form or another, all but three of the remaining individuals offered lessons that would encourage discovery and promote critical thinking. This was as true for professional educators as for writers or social activists. One of the more interesting responses came from the head of the education department at a major California State University, when she said, "Be skeptical in the face of claims by so-called experts who make these claims in the name of science; look for evidence." As mentioned above, most of the people surveyed implied a similar admonition to "beware" of much of today's information...

"Try to understand concepts deeply...." "Learn how to learn...." "There is always more than one point of view."

Certainly, a seemingly general trend throughout was to impart to the student that somehow there is a deeper truth for which to strive, something basic that is not being made readily available within the system as it is now designed. This response was true for teachers from middle school to the university level. These responses and those following for the other four questions on the survey will be more fully addressed and analyzed in the final discussion chapter.

The second question was: *Do you see within the process of education an inherent ritual that could be conceived as universal and perhaps even sacred?*

Approximately a third of those who responded indicated that such a process existed within an element of the educational structure, particularly the private school sector, but was not often, if ever, implemented in our public educational system today. This one-third also indicated their individual attempt to, in fact, incorporate the concept of education as a ritual into their teaching. As stated by one of the authors of *Conscious Education* (Gang, 1993), " I use ritual and ceremony to concretize and confirm an activity, allowing each member to take an active role- passing a torch, dedications, etc." All of them saw the ritual as fundamental to the teaching process and extremely important in the passage of knowledge. Two of those surveyed had adopted the use of actual ageless rituals, involving chanting, dance, and storytelling as a focus from which to work.

The most common response was a simple "no." Indeed there was a consistent tone of criticism, if not strong disappointment at the vacuity of the present process.

As one educator put it: "Formal education, as we have organized it, socializes students to the norms of their age group, which results in group movement through the grades. Following one's own inclinations is discouraged by this group movement."

It was, once again, a Native American who perhaps captured the essence of the question and whose response was on that alternate level of educational purpose that is so critical to

reincorporate today. As he said, "...the process of transferring aesthetic, social, and sacred paradigms (myths) from generation to generation was the inherent, universal ritual within the educational process."

On the other end of the scale was this response from a professor of education at one of our more prestigious universities: "The preliminary exam, after the first or second year of graduate studies, in which students must show what they know and how they think." This is the universal ritual.

To the next question on the survey, *" Do you believe that our present educational system encourages the adoption of such a viewpoint (of an inherent ritual that is universal and/or sacred)?"* Twenty-five of the thirty-four answered in the negative. Some were relating this to simple rituals such as testing, graduation and so on , while twenty believed adamantly, that the present educational system is totally devoid of any truly meaningful ritual. This was best exemplified by a local high school geography teacher, when he wrote, "Increasingly, the present U.S. public school system seems disinclined to do more than pay lip service to this ritual (teaching sentient literature) for the vast majority of its pupils. The select minority is advanced this way, but the systemic (economic and manpower) effort needed to overcome an increasingly electronic home background is simply not being done very well, if attempted at all."

Some of those questioned were more succinct, as the retired education professor wrote, "No, that's why, after 25 years, I left."

Another wrote, "No. Especially in the early formative grades, children are forced day after day to do rote memory of inane facts, as though all of our history was measured from one war to the next. Where are the women, the colors? Schools are there to imprint and seem little interested in what the student thinks or even who they are."

And, as the woman who had spent four months on an extended walkabout with the Australian Aborigines wrote, "No. Our society has everyone in a social security identification computer box, and there is certainly nothing sacred about it. We are busy separating church and state. I relate sacred to one's beliefs and values, more on the religious side for lack of a better word."

The nine "Yes" responses to this question of encouragement of ritual in education, all gave examples of those rituals that have to do with matriculation, testing, and graduation. As one responded, "Yes, in the sense that educational institutions follow each other. An example is the so-called Socratic method in law schools - it is used because everyone does it and it originated at Harvard".

In regard to the question about whether a ritual process *"...would be beneficial to incorporate into our educational system"* (with the implication that it would be different than the basic ritual of entering, testing and leaving), the responses were, not surprisingly, similar in distribution as for the previous question. That is, twenty individuals answered in the affirmative, each indicating the beneficial aspects of incorporating "something greater" into the process. The five individuals who did not fit the previous patterns indicated that it was not only beneficial, but critical.

The responses to this question included everything from, "Rituals can be beneficial if they serve a purpose. They do standardize things".

To the somewhat more eloquent, "Oh yes, once upon a time in the village we all lived in, there were elders. They watched the children, encouraged them, taught them, challenged

them, and then helped them to define who they were to themselves. And they imparted to them real tools, skills for living, practical knowledge. And then they added to their sense of self, the importance of their place in the larger whole.... This is the benefit of ritual!"

Of the fourteen who replied in the negative, the responses went from a simple, "It is not beneficial to our system," to "It is incorporated. It needs to be reduced so that true education, which is individual and distinctive, is encouraged and group socialization to conform is reduced."

The last question on the survey was: *If it were up to you, what would be the underlying concept that this ritual process would use to inspire students?* The responses indicated that everyone, regardless of whether they had thought a ritual process beneficial or not, had a focal concept for inspiration. Nine of those surveyed, in one form or another, believed that the concept of a shared oneness (with the planet, universe, and so on) was indeed the most inspirational concept a teacher could convey. Each implied, in his or her own way, the importance of sharing the "wonder" of the physical universe and the students' very real place in it.

As one high school educator wrote, "The unexamined life is not a life which adjusts to change well, if at all. Philosophic and emotional examination of one's existence is crucial to coping in life."

Those who did not have this holistic concept were inclined to reply as one educator did, "to teach critical thinking."

The results of this survey were rewarding and interesting. The discussion in the final chapter will more thoroughly examine its relevance to the continued evolution of my ideas and perspective as a teacher.

VIII. A POSSIBLE CURRICULUM

Difficulties in implementing Change

How do we incorporate, then, these elements of the learning process, these chemical, physical, cosmic, holistic attributes, into some form of ritual that will be acceptable to our educational system? It will, of course, not be easy. We have educational processes which successfully supply young minds for a socio/economic system that actively denies a greater purpose, such as the Great Enterprise. Yet, many agree that the process is failing to inspire and stimulate those young minds to approach their future with enthusiasm or creativity. In this section I will offer a basic curriculum which I believe would go a long way toward remedying the situation. I do not believe it is the ultimate curriculum, but it is one that can be a foundation for dialogue and further innovation.

To be successful, it will require the understanding of teachers and administrators of the logical value of the principles elucidated in previous chapters of this dissertation. It will, indeed, require a shift in the entire educational paradigm from molding the mind to freeing the mind, the practical benefits of which appeared in chapter six and will be once again addressed in the discussion. It will also require a great deal of patience, in the sense that there will not be the orthodox signs of achievement that are so much in demand in our present system. How does one evaluate inspiration? How does one know when the flame of reason has been ignited? This will be a process requiring a faith not only in the eventual outcome, but in the student as a vessel perfectly adapted to the journey toward that outcome.

Pertinent Neurological Work

Through the work of Rudolph Steiner (Steiner, 1918, Steiner 1922), and more recent studies done in neurophysiology (Edelman, 1992, Pearce, 1992 & Begley, et.al.1992, pp. 66-7), it is clear that there are periods of optimum neural integration within the human brain. That is to say, there are specific ages at which a growing child's brain is physiologically geared to the evaluation of information and the concomitant organization of that information into a personal philosophical and functional mindset. This phenomenon is particularly noticeable between the ages of four and six, and then again from thirteen to seventeen or thereabouts. There is an actual "pruning" process that occurs during which various integrated brain circuits are electrochemically cut to provide a more efficient and more focused "survival" network. The survival is emphasized, because it does appear that this is the ultimate function of the "pruning." Survival, in the broadest sense, that is, information which will insure the successful continuation of the species within the biosphere both as a physical being and as a spiritual being. So here we are again, with a clear, physical correlation between survival knowledge (recognition of place), and the learning process. I include this information, because it is a factor which could be effectively incorporated into the design of any educational system in the context of the Great Enterprise. To disregard, clear, chemical/physical connections between learning and age, is denying the very basis of our natural existence as discussed in chapter four.

If one accepts the results of this present neurological research, then it is possible to delineate a child's early learning process (to age twenty) into three broad periods. That

period from seven through about ten, then from about eleven to fourteen and finally from eighteen to twenty.

During the first period children are in the hands of our school system, and it can be viewed as a specific learning era from kindergarten to about fourth grade. Interestingly, one way or another regardless of philosophical bent, it seems that both public and alternative schools have acknowledged this in their curriculum development. It is rare, however, that the public school system is willing to recognize that it is just at the kindergarten age that a child has gone through his or her first "pruning," and the brain is anxious for more information regarding the greater reality beyond themselves, and most importantly, how they fit within it. This is the period when many indigenous peoples begin relating the sagas and introducing the child into the rituals of the people. This period, which runs from six to approximately eleven years old, is a period during which the color and grandeur of the Great Enterprise are revealed in a dramatic and informative way.

This is also a time when play is as essential, if not more so, than any type of academics. It is a time when the child is best introduced to the wonder of nature, by interacting with it constantly in the school context. This is successfully achieved at least to some degree, by the extensive field trips mandated by the Waldorf System and others, with which I have had considerable experience. It is also included to some degree, in the early "free school movement" at Summerhill and Sudbury Schools (Greenberg, 1987 & Neill, 1977), but has only been fully developed recently by the most progressive public schools. A school which has taken this concept as the focus of its early programming is the Spring Cove School in Bellingham, Washington (Spring Cove Brochure, 1981). There, the entire K through eight program brings together basic learning functions (the three R's), while maintaining active participation in the outside world. This participation is in the form of actual involvement in local community action from political administration to retail business. Children are actively incorporated in the daily life of the community by interacting with the flow of events around them. There is much more of value in Spring Coves curriculum, yet once again the introduction of the student into a perspective of their education being a process of understanding the Great Enterprise is not fully exercised or addressed.

I would propose the following basic curriculum for the years which encompass grades K through four:

- An introduction to nature through extensive field trips which would take place at least once per week. Included would be extensive hands-on interaction. Encouragement to draw and provision for an in house library of reference books and collector's guides, would be made. Focus upon experiencing the environment would be the ultimate aim. Cover a variety of ecosystems and extend those to biomes as children get older.

- Storytelling. Introduce the great sagas; encourage dialogue on the dynamics of the individuals and circumstances. Bring in multicultural storytellers to present ethnic variables.

- Incorporate the night into their lives. How it happens, how things change. Observe again the same areas visited before, but see the nocturnal life forms emerge.

- Discuss and encourage the concept of the dream world as a continuation of reality. Teach the exercises for lucid dreaming.

- Encourage mimicry to instill an understanding of species differences, through mask making, dance, music. Not just life forms but inanimate objects also - "Be a rock."

- Introduce the basics of astronomy and the child's physical place in the cosmos.

The next major period, from approximately age twelve through fifteen, has been recognized throughout the ages as a time of initiation. It is also a time when the brain is physiologically geared toward another "pruning." It is in need of information that will once again, insure the survival of its keeper in a greater reality, demanded by the changing external environment, both physical and social. Most of all, it is a time of feeling a great need for belonging and for understanding a higher level of oneness with the natural world. This is the period that I have personally found to be one of the most rewarding and challenging in terms of opportunity for the teacher to inspire and stimulate.

I have found over the past twenty years of teaching that at this age, there is a quest for "place" which is most open and responsive to ideas and alternatives of broadest scope. This is a time when children are eager to test their emerging philosophies with the current status quo. It is a time of unrestricted imagination within the child, where reality and fantasy are in flux. This is an ideal time to introduce the physical basis of reality. In a very real sense, it is a time for metaphysics, the study of the nature of the Universe.

Among indigenous peoples, this is the time of introduction into the mysteries of the people, whether the I'kung of Africa, or the Samoyed in Siberia (Mander, 1991).

Unfortunately, at this very critical time, our public schools choose to begin their molding process. A process in which the student begins to be seen as a potential worker, and therefore must learn, in a highly formalized manner, the tools necessary to be a "successful worker". What a tragedy that at this young and most receptive time, our school system chooses to deny the innate desire for initiation into the mysteries of life.

As is so well put in the Three Rivers School brochure: "Throughout the world's cultures, it has been recognized that it is during adolescence that children first comprehend, appreciate, and retain the knowledge of their culture. This was passed to them in the form of stories, rituals, songs, and dance. We live today in a far most complex world, yet it is possible and essential to pass both the story and the knowledge of the complex world. Too often in our present culture, only those parts of the story leading to a vocation are presented. This leaves a void in the spirit as well as the mind" (Three Rivers Brochure, 1986).

It is possible to pass on both in this complex world, if and only if we have the patience to wait for the unfolding of the child's intellect, imagination, and talents at a time when it will be of greatest service to them both practically and spiritually.

I would propose a focus during this period in the students educational life on the following. To some degree this is a shortened version of the lecture series presented in chapter three which I have found so successful over the past few years.

- Latest concepts of cosmology. Present theories regarding the structure of the universe.

- Biochemistry, from the "Particle Zoo" to anatomical systems and their physiology. An emphasis would be on cellular structure as the format of all life.

- The inherent logic of natural selection and its resultant manifestation as evolution.

- The Epic of the human animal from prehistoric times to Cro-magnon.

- Our place in the flow of cultural development. The history of science, the great works of literature.

- World history, taught by ethnic teachers with contemporary translated texts. Emphasis on history interpreted differently according to perspective.

The third critical period is that which extends from what would be a sophomore level in high school, to the age of twenty one, or when most students are completing their college education. With the foundation set by the previous two periods I would propose that this third period allow for the greatest amount of academic flexibility -flexibility in the sense that at this time the student needs to begin their own self motivated quest for information, with an emphasis on direct dialogue with those who can satisfy their deepest intellectual questioning (McLaren, 1986). Now is the time for the system to provide for unlimited access to information that the students themselves request. At this level I would propose the following:

- Freedom to choose only those courses that one feels will benefit the path they are on.

- Focus on dialogue rather than lecture.

- Provide for and encourage student exchange programs, if not make them a mandatory part of the experience.

- Provide for those who are ready, concentrated programs of study leading to a particular profession or avocation (to be open ended so as not to discourage movement from one program to another)

- Provide for a program in the technical subjects for those who prefer this direction (again, with pathways available that allow for continued individual exploration into either direction. It is absolutely critical that the two directions indicated be seen as equally important within the Great Enterprise).

- Encourage the continuation of the creative arts, whether music, dance, drama, and the like, as a means of expressing the knowledge gained from the previous two periods.

- Perhaps most importantly instill through dialogue, a recognition of the responsibility to use the knowledge gained, to work in harmony with the Earth, and to be of service to the Great Enterprise.

I believe that a basic system such as I have proposed here, would satisfy not only the yearning for knowledge, but would go a long way toward providing a vision of the Great Enterprise.

The difficulties inherent in implementing a program such as the one I have outlined are numerous. It is, however, a time which demands innovation in education at a level not conceived of during previous eras. That these innovations may illicit a substantial degree of resistance and suspicion is undeniable, but the beginning of dialogue, extensive dialogue, is imperative. The damage already done is not imagined, it is frightfully real and needs to be addressed in the strongest terms (Edelman, 1992 & Pearce, 1992).

RESISTANCE

We may see some resistance to implementation of such a program already at the lower grade levels. Indeed, it may be here where the most resistance will develop. In general we are a society that seems to wish for earlier and earlier "performance" by our children. Whether that be in math or reading, we delight in and encourage the development of these skills at constantly younger ages. Recent research in neuroscience and the examples from those indigenous cultures mentioned earlier, both clearly indicate the damage that may accrue from this (Pearce, 1992). It will be necessary to educate the parents to the ramifications of these studies in order to gain their support for changing the process.

An example of this occurred in my life, when my children reached the age when their grandparents felt they should be reading, and they were not. According to the public school program, they should have been reading by this time (eight). Fortunately, they were attending a Waldorf School and had not reached the age recognized by Steiner (1972) as that when a child is ready to develop this skill WITHOUT COERCION. Much to their grandparents and my delight, they began to read fluently just as predicted by their teacher just one year later. Assuring the parents of the ultimate success of these progressive systems is paramount to the implementation of those systems. This can only be achieved by patient

education of the parents through examples and heartfelt belief in the systems by those presenting them.

In order to implement the second phase of the curriculum as described in this chapter will also require substantial skills of persuasion. This is a period when many parents and educators are particularly convinced that only more classroom time and greater discipline can control the apparent chaos of a child's thinking (12-15 years). This is without question one of the most critical periods of intellectual growth-not so much in regard to abstract philosophy, but in simply wanting to know their place in the "scheme of things" on a physical level. This can manifest itself within the classroom as described so eloquently by Peter McLaren when he says, "When students responded with a sense of immediacy or purpose, either verbally or gesturally, to the teachers performance -when, for instance, they became the primary actors within the ritual of instruction- then they engaged in an authentic pedagogical rite: the surroundings were sanctified, and the students became cocelebrants in the learning process which was characterized by intense involvement and participation" (McLaren, 1988, p.165).

It can be equally as satisfying for the student to engage in the ritual process of initiation into the adult world through interaction with it daily as a part of the curriculum, as so successfully practiced by the Spring Cove School in Washington state.

Personal Experience with Outcome

In my own experience, this period has been especially rewarding. This is because of the enormous energy within children at this time and their enthusiastic embracing of our cosmic story (again the Great Enterprise). I have found without exception that students at this time thoroughly enjoy the prospect that they belong to a grand swirling mass of matter and energy that has principals which culminate in the beauty of THEIR own world. The greatest reward, however, has been the elevation of their spirit, which is manifested as much by their body language as their expressions of wonder during their intellectual discoveries.

When looked at from the historical perspective, whether in McLarens' classroom or the active participation within community as encourage by Spring Cove, it is once again the ancient ritual of initiation. There may no longer be cave walls, mysterious flickerings of light or dancing and drumming, but the heart and mind of the child is waiting. It is not a time to mold but to free. Reconciling the present educational approach to this period with the concept of ritual will be difficult. It will depend on the recognition within everyone, particularly the teachers, of "Beat One".

The third and last phase of my proposed curriculum would also have its critics. This is the period where I recommend the greatest flexibility and choice in a students schooling. This would be a period of least restraint on the pursuit of information and the choice of which information a student desired. Strengthened by the knowledge of place provided by the two previous periods, the student would now feel the freedom of self directed study. Once again, the implementation is not deterred by the student's abilities or any form of financial consideration but would most likely be restrained by parental and social issues. What tangible benefit would society gain from such a curriculum? Perhaps nothing less than the survival of our species and the realization of the enormous potential we represent.

Gauging Success

One might also wonder what would gauge the success of the process as the students made their way through this proposed curriculum? Along with this one might ask how interest is to be maintained and encouraged in the student so they are eager to go on to the next level of study? I have found that giving the student as much support during "testing" that I could, results in a natural desire to express what they know. I have found in particular that when my students were allowed to interact with each other during a test, their intensity regarding the full expression of what they knew was at its highest. In the alternative school environment, experimentation is encouraged. This was especially true for me during my four years with the New School of Ukiah.

It was there that I tried a new testing process which I believe is extremely worthwhile and satisfies the two requirements stated above. When it came time for a "test", I told my students to think about what we had discussed over the time leading to the test. They were not to study per se but only to think (I used the word contemplate) about the material. When the test day came I asked them to circle their desks and then to discuss the answers to my questions until they came up with an agreement as to what was the best answer. They all were then allowed to register that answer on the test. It was also made clear that anyone who wished to digress or disagree from the common answer could do so. I was delighted to find that the minute I left the room they engaged in enthusiastic dialogue, and as a group they joined in a common endeavor to share their knowledge and work towards a common good. Reflecting on it now I truly believe that more genuine knowledge may have been exchanged at that time than all my hours of teaching. Their eagerness to do it again was expressed immediately. I believe that this could be true for all grade levels and all people. As I stated earlier, this is not meant to be the ultimate curriculum but it is one that I have found to work and it may just have merit for a greater audience.

IX. CONCLUSION AND IMPLICATIONS

The Process

The purpose of this final chapter is to organize the information preceding it into a coherent and valuable conclusion. Stated in its simplest form, which is likely to be the best, what is it that I have truly discovered during the preparation of this dissertation?

This has been first of all a very organic process, in that I began with an idea twenty years ago that became a philosophy of teaching. Using the opportunity provided by the writing of this dissertation, I have investigated various relevant areas which might give me some clarity regarding both the initial idea and my interaction, experiential and philosophical, with it. The question that became paramount as I wrote was, how do I really feel about this teaching philosophy that I practice? Indeed, the dissertation process became a test of my beliefs, my ability to adapt to new information, and my willingness to recognize and then express the deepest level of understanding that my teaching has engendered.

It has been a journey replete with the joys and sadness of any journey. In this case, there is a sadness in the recognition of the immense gap between our present educational system's focus and methods, and that which could be practiced. The sadness is exacerbated by the recognition of the extant systems that are available today, and the ancient systems that have sustained and perpetuated them which are ignored by those who plan and direct the educational process in the United States and throughout most of the First World. What is of additional concern is the exportation of this "empty" system into Third World countries, where, ironically, we find the most viable remains of the ancient systems.

Problems in the System

To deny that the present educational system is a failure requires an extraordinary level of myopia. One need only talk to teachers at almost any level of education to realize that something is very wrong. This is an extremely important issue, perhaps more so than it has ever been before. This is to a great extent, because of the very tempting solution, which the electronic industry, principally television seems to provide. The insidious intrusion of television into the "real world," as described by Gerry Mander (1991), and shared by an unfortunately few educators is eliminating the opportunity for human interaction. The consequence may be an electronosphere rather than a biosphere. What is implied in such an electronosphere is an interaction between people that is defined by their mutual relationship to an electronic environment. This effectively eliminates a person's interaction with nature and demands an entirely different basis for relationships. This will not be a basis that will see the natural environment as anything but a two dimensional backdrop for a three dimensional Virtual Reality. The ancient basis, built on a shared reverence for life in all its manifestations will no longer exist. This interaction is the very essence and focus of the ancient systems whose success can be established.

This has been, of course, the focus of this dissertation: is there some tangible thing that is missing in education and can it be retrieved through something as "nebulous" as a ritual process that must not only engender creativity and spiritual awareness, but also accomplish some very important practical goals? Is there some real value to maintaining a ritualized approach to the human-nature relationship, and do we have examples of what happens

when this is denied us? We have made this decision to deny the relationship between ourselves and the natural world more than once before. Indeed, twice in the last 500 years, it has resulted in calamitous changes in the material and social structure of our planet.

Early Directions of Education

The first was in the late 15th century when Western Europe went through its Renaissance. We have come to revere this period with such profound awe that we fail to recognize the full extent of its influence. I do not refer to the changes engendered by the material inventions of all kinds, from medicine to art, which were significant in their own right of course, but I refer to some of the philosophical and social ones.

It was during this period of almost three hundred years that a new and very different philosophy gained acceptance in Western Europe. At its core was the concept of "man the divine." Within that concept was the belief encouraged by both the church and the state that man was the unique and absolutely inviolate instrument of God and the State. It should not be dismissed lightly that it was "man the divine" and not woman, or even, man/woman. This in its own right is worthy of an entire volume of investigation and discussion (Eisler, 1987). Be that as it may, this concept not only encouraged but rewarded "man" for dominating and subduing nature, whether that meant plant, animal or fellow human being. From this point on, with the added support of the merchants, Western Europe began its conquest of native lands and their people. To perpetuate its rapacious methods, it taught its youth principles that would encourage its continuation. Many of these principles were popularized by the sixteenth century writer Machiavelli. In his book, The Prince, Machiavelli outlined an approach to human nature that made greed a virtue. Those principles are still with us today, and at their core is still the belief that man is above all other creatures and has a God-given right to control them in any fashion he wishes. This has been allowed to continue through the constant demand for more and more goods, which in turn requires more and more resources. It became critical to this system to perpetuate the belief of Man the Divine so that the destruction of land and people did not interfere with the destiny of the system to provide endless economic progress. This was not just peripheral to the development of the educational system but mandated by it. This process in itself has done much to numb the intrinsic regard for life outside of the self.

An influence which was more universal was that of the seventeenth century philosopher and scientist, Rene Descartes. Using his understanding and interest in the mathematical sciences, he devised a philosophy that provided for a mechanistic universe, divorced from the mind with the only connection between the two through the intervention of God. He also went on to emphasize the importance of rationality and logic over experience (Stromberg, 1966). Along with the revelations of his contemporary Newton, this mechanistic approach to reality successfully drove out any remnants of the nature philosophies and their ancient Gods. Without the incorporation of the values implied in these natural concepts, provided by ancient experiential wisdom, it became acceptable to exploit the environment and its peoples in a way never before imagined.

The second event which influenced the core of our educational system , and in very much the same way, or at least with the same consequences, was the industrial revolution (Kuhn, 1970). It was during the early stages of this period, beginning near the turn of the 19th century, that it became abundantly clear that in order to provide the raw resources

necessary to fuel that revolution, nature would have to be sacrificed. The educational system again became the vehicle for the continuing philosophy of man's favored place in the eyes of God. Only by perpetuating this attitude among the youth would it be possible to destroy the planet's environment so blatantly.

By the 1930's and '40's, the public school system had given itself over to the training of workers and had little or no room for discussing anything so esoteric (and radical) as the ultimate aim of education being the knowledgeable, even wise and spiritually free, individual (Carey, 1978).

Alternative systems

The question of whether anyone has successfully implemented and maintained an educational system that not only teaches young adults what they need to know to survive on a physical plane, but also includes avenues for spiritual growth was addressed in chapter three. Suffice it to say that we do have examples of such systems. The specific ones mentioned earlier such as the Native American, Australian Aboriginal and African I' Kung, are relatively familiar to most people. In fact, successful systems abound throughout the world (Eskimo, Yanamamo, Masai, Shikh, Papau.....). They are successful in that over periods ranging literally into the tens of thousands of years they have passed on to their young both an ability to engage in satisfying work and play, as well as providing spiritual guidelines which act as the core of one's perception of the Universe. This dual training allows one to adjust gracefully to the inevitable changes that are consistent with a dynamic steady state environment such as we live in, and also allows for the individual to recognize the ultimate oneness of their spirit to that of the whole.

These systems are unfortunately seen as applicable only to the people who practice them, and they often happen to be the indigenous or primal peoples of the "undeveloped areas" of the world. What does not seem to be at all understood is that their example of living in harmony with nature is the very first principle of spiritual awareness and guides an individual into working with the Earth in a way that not only provides material necessities (even luxuries), but also insures the balance which is absolutely fundamental to the successful continuation of life.

A very dramatic and important example of the applicability of these primal belief systems is in the tropical rainforests of South America, particularly Brazil. The critical importance of the rainforests as the "lungs" of the Earth is irrefutable. Yet, we find that in order to satisfy the greed of a very few, these forests are being decimated on a scale that is truly shocking (60,000 sq. miles per year). This would not be happening if our modern belief systems (and our educational institutions)incorporated the reverence for the Earth that is such a focus of these primal belief systems.

What one gauges as educational success is obviously at the crux of this impasse. If we use the criterion of turning out pliant workers who will perpetuate the previously mentioned concept of the ultimate value of economic progress being the goal of life, then to some degree we have been truly successful. On the other hand, if the intelligent use of resources in balance with nature is the only way to insure our future, then we have failed utterly.

Ironically, it is inherent in the system practiced by Third World Peoples and very obviously among the Native Americans, that we see an educational process that effectively

fosters a reverence for nature. This in turn insures the health, both spiritually and economically, of this planet.

Applicable Today?

As I described earlier in this dissertation, my experience after twenty years of teaching has repeatedly vindicated the idea that there is a very great desire among students of all ages to be made more aware of their role in the cosmos and they are not at all afraid to accept it as a scientifically explained phenomenon as well as a spiritual one. It is in my Elders classes that this is most evident. To a great extent, these are individuals who have depended upon organized religion to provide their "cosmic security". Yet, even with years of dogma, they resonate with information dealing with everything from Quantum foam to dark matter, and glory in the breadth of the reality we share.

It has been equally evident from my experience, that it is possible to incorporate science into spirit and visa versa with relative ease. This amalgamation is practiced by many scholars of all kinds today, but it has not even been considered by public school administrators. We do introduce a certain level of environmental awareness into our curriculums, but nowhere does it address the far-reaching issues of the quest for that knowledge to be in itself the key to success. The problem is exacerbated by defining spirit only in terms of Judeo-Christian dogma, which historically serves more to separate than to join. The reverence for and protection of nature, is absolutely fundamental in a child's sentient growth and is the immediate and more necessary function of the educational system.

I repeat, regardless of the class which I have taught, whether in science or history, a foundation focusing on the various levels of connection between ourselves and the natural world has always been enthusiastically embraced by my students. This applies to students who ranged from nine years old to ninety. In one of my earlier papers for WISR, I developed a survey in which the basic question was, "What piece of information would you most want to have when facing a major paradigm shift?" This shift was previously explained as a period in history when the old laws governing cultural direction and stability are dramatically, if not radically altered. The survey results indicated that, as one became more mature, the importance of recognizing "place" in the cosmos took on increasing significance. The eldest group surveyed was almost unanimous in this opinion.

What is valuable to note here is that this desire for knowing "place" was best satisfied by a concrete, tangible and physical explanation that allowed for scientific principles to be accepted in a context which included universal spirituality. This has been true, as earlier indicated, whether among young children whose confidence is restored and manifested by their body language or verbalization, to elders whose very perception of the cosmos is expanded and manifests as insatiable curiosity. Indeed, the concept of pursuing the Great Enterprise was evidently very empowering to this group as well as to the younger people surveyed.

I am quite confident that my observations of this phenomenon are valid and consistently supportable. From these observations alone, the incorporation of a holistic perspective on the connections between ourselves and nature into the educational curriculum seems valuable.

The ultimate value of incorporation of this concept is evident in both natural phenomena, such as chemical harmony, and practical phenomena by insuring the

continued advancement of our species technologically. Research in the field of neurophysiology is clearly indicating the relationship between body and mind. This connection which was seen only a few years ago as highly speculative, if not entirely suspect, is now gaining adherents in various fields (Bower, 1991, p.217). The implication is clear; when our species is engaged in activity, whether mental or physical, that elevates the spirit (induces chemical changes which act as natural euphorics), this elevation enhances our health in both these realms. It is also clear that this elevation is mediated by chemicals liberated by the brain and perhaps other organs which themselves can be encouraged to do so through ancient processes such as chanting, drumming, dancing. Perhaps most importantly in relation to this dissertation, through individual recognition of "place," which is again, no more nor less than an understanding of the nature of the universe and our natural, physical connection to it. When this connection is made clear early and reinforced through the life-long process of education (with the ultimate goal of wisdom), then the individual will be elevated no differently than a primal person dancing in gratefulness for an abundant harvest.

I have been fortunate to experience this personally more than once. Perhaps a relevant moment which I can use as an example is one that occurred to me some twenty years ago. I am sure that a great majority of people have at one time or another had a similar experience.

My family and I were attending an arts and crafts fair in the town of Albion on the Northern California coast. One afternoon around a pleasant little pond a group of drummers gathered to do some extemporaneous playing. As they played more and more people joined in, some with drums others with flutes. At some point it was no longer an exhibition of individual expertise but a cooperative making of music. People joined in with sticks, cans, whistles, rattles, and anything else upon which one could create sound. We had achieved at that point, Mickey Harts', "Beat One" (Hart & Lieberman, 1991) As I reflect upon that experience now I realize that what had occurred was a recognition of "place," and through the combination of sound and thought, we liberated not only chemicals but ourselves. That experience after twenty years still strengthens and broadens me as an individual. If this can be achieved by one moment such as this, one can only imagine the level of elevation experienced by people who still incorporate those ideas and activities within their learning systems.

This state of elevated consciousness can be experienced by any student, if given the incentive and guided by teachers who are convinced themselves of the truth of the Great Enterprise. Beyond the natural benefits of this elevated state of consciousness, in terms of good mental and physical health, is the very practical benefit of having a population of students whose approach to their future and the future of their culture is inexorably tied to maintaining the health of the planet as well as themselves. It cannot be overemphasized how important this attitude is to the success, and frankly, the very survival of our species.

Relationship to Resources

Simply put, all our technological progress depends upon the creative use of our planet's natural resources. To abuse them means environmental degradation and the end of progress. To sustain them is to insure both our survival as a species and the maintenance of an

economic system which rewards creativity and acknowledges the potential of our cultural, as well as our spiritual future.

If the business community, as well as the political, military, and all others were made aware of this absolutely basic concept, it is very possible that it would need only a small cadre of individuals proposing an appropriate educational system to have the full support of these social institutions.

If it is then the case, that there are profound beneficial consequences to establishing an educational system based upon a principle of recognizing the connection between an individual and nature, then what are the chances of success in implementing such a system? I attempted to answer this question by surveying a number of educators as explained in Chapter seven. Since that survey I have also had the greatest of good fortunes to discuss my thesis with a group of very talented and devoted educators in New York state. These are individuals who are dealing with the most difficult situation of working with children and their parents who have no apparent concept at all of their relationship to the natural world or any "Great Enterprise." These included an administrator, two professors (one of math another of writing), and two veterans of the New York Public School system. These two, Harold and Mae Zlotnik have devoted their lives to the educational process in that city and have both, through Harolds' curriculum development programs of the 1960's (Svigals, 1969 & Allen, 1968), and Maes' "dining table" critique of my thesis, contributed immensely to my perceptions regarding the successful implementation of the system I propose.

To begin with, from all sources, it is clear that the curriculum which I propose, or at least its principle focus will be extremely difficult to implement. My results indicate that there are a number of basic reasons for this. I am sure that the reader can find many more, but these, I believe, are fundamental.

Implications of the Survey

Regarding my basic question ,"how does such a proposal (the ritualization of education) stand with my colleagues in the field"?, the survey did provide some interesting results. I do not imply that the survey was large enough or thorough enough to draw a universal conclusion, but the point of it, which I believe it satisfied, was to "test the waters."

In response to the first question, "As an educator, what would be the most valuable, long lasting lesson, or concept that you could impart to your students, young or old"? The survey results indicated that given the opportunity to express their deepest intent as a teacher, most saw the ultimate lesson as one which would in one way or another increase academic efficiency. What is of interest here is the overall lack of intellectual stretching or extending into realms of the metaphysical or spiritual. Only a small number of individuals questioned indicated the importance or value of some, one fundamental force within our species that was shared and could be tapped as a source or goal of the educational process.

This was not surprising, but admittedly it was somewhat disappointing. It implies, at least to some degree, a traditional and narrow perspective of education's role in our culture-not only in terms of education's ultimate present goal, which is to prepare people to fill social, industrial niches, but in regard to education's role in developing an intelligent, sensitive, and even wise populace. Of the thirty-four replies, only five indicated their willingness to go beyond this narrow order. The eloquence and strength of their words however, spoke volumes regarding the depth of their commitment.

If academic efficiency is measured by the ability of an individual to associate all matter of information into a coherent, knowledgeable, and wise vision of reality, and if this then provides them with the intellectual tools necessary to live a productive and creative life, then education has truly served its highest purpose. Unfortunately, this is not the end product of our present system; perhaps the inability to see beyond the traditional and ultimately restrictive ideas nurtured through post Renaissance history is partially responsible. It appears then, that the basic tenets of the teaching profession are in need of serious reflection and re-evaluation.

The second question "Do you see, within the process of education an inherent ritual that could be conceived as universal and perhaps even sacred"? drew replies from a simple, "Yes" or "No," to that expressed at one end of the philosophical spectrum by the statement, "The process of transferring aesthetic, social, and sacred paradigms (myths) from generation to generation," to that at the other end, by the statement, "the preliminary exam after the 1st or 2nd year of graduate studies in which students must show what they know and how they think."

Again, the overwhelming number of replies indicated that either the respondent did not have his or her own concept of a universal and inherent sacred base in education, or that the system itself did not have one. It is also possible that there are many in the field of education who would

enthusiastically embrace a program that included spiritual or ritualistic processes, but are reluctant to come forward from fear of censure. As in the previous question it was a small group of individuals that were able to relate to the idea of a ritual that might be sacred or universal. Once again, the ability to see beyond the traditional was simply missing in most of the replies from those surveyed.

In response to the third question, "Do you believe that our present educational system encourages the adoption of such a viewpoint?", the answers were as one might expect. Those who saw the ritual as one of academic processes such as testing, graduation, or the like, believed that schools did encourage such rituals. Those who related from their own perspective to the ritual I have proposed thus far, unanimously agreed that there was no encouragement for instituting this belief into the present system. Indeed, the responses were adamant in their criticism of the system as not being able to incorporate such beliefs and rituals. As an anthropology professor stated,"No! Our present system fosters no lasting bonds. It's all FTE body counts and no real transaction between student and professor."

A small number of individuals recognized the essence of a ritualized educational process but did not believe such a process could or should be included in educational institutions. Here again it is clear that there are serious impediments to the implementation of ritual processes in the present educational system.

The fourth question, "Would/ Would it not be beneficial to incorporate such a viewpoint into our educational process?", drew responses which were consistent with the previous expressions. That small contingent who believed in the ritual process were highly in favor if its incorporation and invaluable benefits. A somewhat greater number were inclined to agree, but only in extremely vague terms.

Those who saw the ritual process as relating to such events as testing and graduating were unanimous in their agreement that it was beneficial, but the appreciation of its value was sanguine and without the spirit implied in the previous group of responses.

There were also those who saw no benefit from any of the rituals implied. Indeed, more than a third of those surveyed indicated that not only was there no benefit but that it might even be detrimental.

In regard to the final question,"If it were up to you, what would be the underlying concept that this ritual process would use to inspire students?", it was clear, that each person believed that there should be some guiding, philosophical principal. There was, however, no common denominator, which was not of course unexpected, considering the responses to the earlier questions. I believe what was significant was that almost unanimously, those responding did emphasize the ultimate goal of developing the processes of critical thinking. No one chose to stress the desire to prepare individuals to fill the niches of our social system as an underlying motivation for education. This is itself reassuring, but does not deny the non-existence of a teaching ethos that encompasses a concept of a shared journey of the mind as it evolves through a constantly changing physical reality.

Nevertheless, the view held by a majority of these educators indicated that whatever may be preventing the educational community from embracing radically new concepts of teaching, they are only superficial ones, and with a little encouragement could be modified. This is in itself a sign of hope and its significance should not be minimized.

In view of the focal question of this survey, what do others in the field of learning think about ritual in education?, it cannot be denied that only a little more than a quarter of those surveyed envisioned a process incorporating a concept of oneness with the planet and the forces which shape our reality. That is to say, it is very possible and highly probable that an idea such as I propose, the return to a nature-oriented foundation for education is alien to most educators at the present time.

REALITIES

However, two things must be taken into consideration here. One is that I am not personally in the avant garde "loop" of innovative education, and therefore my impressions are limited. The second is that even though I am not part of the loop, the information I have collected during the process of writing this dissertation has made it abundantly clear that the loop exists . Whether that is manifested as organizations such as The Institute for Educational Studies in Atlanta, Georgia or The School for Transformative Learning in San Francisco, California, or conferences such as will take place in San Diego this February (1994 Annual Conference on Lifelong Learning), the implication is evident; education is being recreated as a holistic process.

In conclusion then, the results of the survey, although admittedly limited, indicate that those individuals who would be responsible for delivering this new (yet ancient) educational philosophy are for the most part, unattuned to its existence and may be somewhat reluctant to become engaged in it unless it was introduced as orthodox policy. Add to this the very real resistance that may arise in the parent community and one can see that the acceptance of such a system would be problematic at best. A simple cluster analysis of the responses indicates the following: Teachers in the Humanities were more receptive to the concept of ritual in education than those in the Sciences (10 of 12 vs 5 of 13), college teachers were more receptive than grammar and high-school teachers (11 of 16 vs 4 of 9), writers and artists were most receptive of all (5 of 6), only 1 administrator of

3 was interested. Concerning whether a universal ritual existed within the educational system, no matter whether implemented or not, the majority regardless of professional position did not conceive of such a ritual (8 of 34). Regarding the question of encouragement of such an idea within the present system, it was unanimous that no encouragement existed whatsoever (33 of 34). In response to the question; would it be beneficial to incorporate some form of ritual, the majority indicated that it indeed would (27 of 34).

The results tends to indicate that although there was a recognition of the possible value of ritual in education, there was little exercise of it and considerable skepticism regarding its successful implementation within the present system.

Be this as it may, I offered in Chapter eight a curriculum which I believe could be implemented in any district, large or small, city or country. As I stated earlier, this is not a complete nor perfect curriculum, but if it can generate dialogue and can effectively move our educational system toward one which addresses our species most ancient desire: to see our "place" and to appreciate the grandeur of life, then I believe it should be examined and tested.

I realize fully that there exists a strong and growing network of educators who are addressing these same issues. At least one of the most important questions is if there is truly a value to rediscovering the benefit of ritual in education, and if its foundation may be something as ancient as our relationship to the Earth, both physically and spiritually, how do we make it work or appeal to the people who will deliver it and those who will depend upon it to provide their children with a satisfying and creative life, while supporting the continuation of a technological future? This is a daunting challenge at the very least, if not heroic. Perhaps it is in that word that there lies a clue to how it can be done.

As Joseph Campbell wrote in his monumental work on myth (1990), one of our deepest driving forces is the hero's quest. Whether male or female, whether in a paleolithic cave or a condominium, we are born to the quest. We have created all manner of myths to explain that quest. We are now at a time when the myths are more important and relevant than ever; yet, they continue to tell the very same story, THE GREAT ENTERPRISE: our story, the story of life and its relation to the universe.

Final Statement

I am more convinced now than ever that an educational system which acknowledges the universal quest for identifying ones "place," both physical and spiritual, while encouraging the development of wisdom is a system that will satisfy the deepest intellectual and spiritual yearnings of our species. Only the words of the myths need be modified to be embraced by our student community. In addition to this, such a system will guarantee the successful continuation of our species both as a member of our planetary ecosystem and as a creative, economically successful one.

It is not the electronospheric future that will rescue our youth from the boredom and restrictive schooling that one of my young students said his generation would be ready to fight physically against, but a future full of myth and music, and shared spiritual as well as intellectual growth. To implement such a system requires great courage, but its rewards are truly priceless.

REFERENCES

Allegro, J.M. (1971). The Sacred Mushroom and the Cross. New York. Bantam.

Allen, J.D. (1968). Curriculum Report. New York. Board of Education.

Beatty, J.K., O'Leary, B. & Chaikin, A. (1981). The New Solar System. Cambridge. Cambridge Univ. Press.

Begley, S., et.al. (1992). Mapping the Brain. Newsweek. April. pp.66-70.

Boslough, J. (1985). Stephen Hawking's Universe. New York. William Morrow & Co.

Bower, B. (1991). Questions of Mind Over Immunity. Science News. 139. p.217.

Campbell, J.C. (1988). An Open Life. New York. Larson Publications.

Capra, F. (1975). The Tao of Physics. Boulder. Shambhala.

Carlgren, F. (1972). Rudolf Steiner. Switzerland. Druckerei Kretz.

Carey, J. (1987). Eyewitness to History. Cambridge. Harvard Univ. Press.

Casson, L. (1977). Mysteries of the Past. New York. American Heritage Publ.

Chaisson, E. (1981). Cosmic Dawn. Boston. Little, Brown & Co.

Chardin, T. de (1962). Human Energy. New York. Harcourt Brace Jovanovich.

Clark, K. (1969). Civilization: A Personal View. New York. Harper and Row.

Clements, M. (1993). What's Wrong with Our Schools? Parade. May. 4-5

Dlugoszewski, L. (1973). What is Sound to Music? Currents in Modern Thought. Fall. pp.3-11.

Dworkin, M.S. (1959). Dewey on Education. New York. Teachers College Press.

Dyson, F. (1979). Disturbing the Universe. New York. Harper & Row.

Edelman, G.M. (1992). Bright Air, Brilliant Fire: On the Matter of the Mind. New York. HarperCollins Publ.

Eisler, R. (1987). The Chalice and the Blade. San Francisco. Harper & Row.

Eiseley, L. (1968). The Firmament of Time. New York. Atheneum Publ.

Eiseley, L. (1957). The Immense Journey: An Imaginative Naturalist Explores the Mysteries of Man and Nature. New York. Vintage Books.

Fackelman, K.A. (1993). Marijuana and the Brain. Science News. 143. 88-94

Fennessey, C. (1993). What's a Good Grade Worth? Parade. May. p.6

Ferrell, K. (1992). Some Direction for our Schools. Omni. 8. p.8.

Ferris, T. (1992). The Mind's Sky: Human Intelligence in a Cosmic Context. New York. Bantam.

Fox, W. (1990). Toward a Transpersonal Ecology. Boston. Shambhala.

Freire, P. (1973). Education for Critical Consciousness. New York. The Seabury Press.

Gang, P.S., Meyerhof, L. & Maver, D.J. (1993). Conscious Education: The Bridge to Freedom. Chamblee. Dagaz Press.

Garfield, P. (1974). Creative Dreaming. New York. Ballintine Books.

Gasset, J. (1969). Some Lessons in Metaphysics. New York. W.W. Norton & Co.

Gatto, J. (1991). Why Schools Don't Educate. Networker. 12. 55-59.

Gore, A. (1992). Earth in the Balance:Ecology and the Human Spirit. Boston.

Houghton Mifflin.

Greenberg, D. (1987). Free at Last: The Sudbury Valley School. Sudbury.

Sudbury Valley School Press.

Gyatso, T. (the fourteenth Dalai Lama, 1992). The Global Community aand the

Need for Universal Responsibility. Boston. Wisdom Publ.

Hadingham, E. (1979). Secrets of the Ice Age. New York. Walker & Co.

Harner, M. (1980). The Way of the Shaman. New York. Bantam.

Harris, M. (1977). Cannibals and Kings: The Origins of Cultures. New York. Random House.

Hart, M. & Lieberman, F. (1991). Planet Drum. San Francisco. Harper.

Hatley, K. (1988). A Neo-Humanistic Model of Education. Holistic Education Review. Fall. 13.

Hawking, S.W. (1988). A Brief History of Time. New York. Bantam.

Herm, G. (1975). The Celts: The People Who Came Out of the Darkness. New York. St. Martin's Press.

Highwater, J. (1981). The Primal Mind: Vision and Reality in Indian America. New York. Meridian.

Hofstadter, R. (1955). The Age of Reform. New York. Vintage Books.

Hofstadter, D.R. & Dennet, D.C. (1982). The Mind's Eye. New York. Bantam.

Hsu, F. (1972). Psychological Anthropology. Cambridge. Schenkman Publ. Co.

James, W. (1973). Learning From the Indians. Philadelphia. Running Press.

Jordan, R. (1991). The Eye of the World. New York. Doherty Associates.

Kaufman, W.J. (1979). Black Holes and Warped Space Time. San Francisco. W.H. Freeman & Co.

Kovnat, D.B. (1992). Welcome Back Moner. Rochester Review. Fall. 3-9.

Kuhn, T.S. (1970). The Structure of Scientific Revolutions. Chicago. Univ. of Chicago Press.

Langer, W.L. (1980). An Encyclopedia of World History. Boston. Houghton Mifflin Co.

Leaky, R.E. (1977). Origins. New York. E.P. Dutton.

Leonard, G. (1986). The Silent Pulse: A Search for the Perfect Rhythm that Exists in Each of Us. New York. E.P. Dutton.

Leonard, G. (1992). The End of School. Networker. Summer. 61-63.

Levin, M.G. (1963). Ethnic Origins of the Peoples of Northeastern Asia. Arctic Institute of North America: Translations from the Russian. 3, 235-279.

Lilly, J.C. (1977). The Deep Self: Profound Relaxation and the Tank Isolation Technique. New York Simon and Schuster.

Lon Hefferlin, J.B. (1969). Dynamics of Academic Reform. San Francisco. Jossey-Bass Inc.

Mander, J. (1991). In the Absense of the Sacred: The Failure of Technology & the Survival of the Indian Nations. San Francisco. Sierra Club Books.

Margulis, L. & Sagan, D. (1986). Microcosmos: Four Billion Years of Evolution From Our Microbial

Ancestors. New York. Summit Books.

Martin, W.B. (1969). Conformity. San Francisco. Jossey-Bass Inc.

Martorana, S.V. & Kuhns, E. (1975). Managing Academic Change. San Francisco. Jossey-Bass.

McDermott, J.J. (1973). The Philosophy of John Dewey: The Lived Experience. New York. G.P. Putnam's Sons.

McKenna, T. (1992). Food of the Gods: The Search for the Original Tree of Knowledge. New York. Bantam.

McLaren, P. (1986). Schooling as a Ritual Performance. London. Routledge & Kegan Paul.

McLaren, P. (1988). The Liminal Servant and the Ritual of Critical Pedagogy. Language Arts. 65, p.165.

Meadows, K.C. (1993). Cable Encouraged in the Classroom. Ukiah Daily Journal. May, 15.

Miller, G.T. (1992). Living in the Environment. Belmont: Wadsworth Publ. Co.

Mishlove, J. (1975). The Roots of Consciousness. New York. Random House.

Morgan, M. (1991). Mutant Message. Mo. M.M. Co.

Most, S. & Grasberg, L. (1988). The Broken Circle: A Search for Wisdom in the Nuclear Age. Palo Alto. Consulting Psychologists Press.

Mountford, C.P. (1970). The Dreamtime: Australian Aboriginal Myths in Paintings. Melbourne. Rigby Limited.

Murchie, G. (1967). Music of the Spheres: The Material Universe-From Atom

to Quasar, Simply Explained. New York. Dover Publ. Co.

Myers, N. (1984). Gaia: An Atlas of Planet Management. New York. Doubleday.

Neill, A.S. (1977). Summerhill: A Radical Approach to Child Rearing. New York. Simon and Schuster.

Pearce, J.C. (1992). Evolutions End: Claiming the Potential of Our Intelligence. San Francisco. Harper San Francisco.

Pearson, C.S. (1991). Awakening the Heros Within. San Francisco. HarperSanFrancisco.

Perkins C.M. & Perkins, M. (1965). "I Saw You From Afar": A Visit to the Bushmen of the Kalahari. New York. Atheneum.

Perkins, R. (1984). The New Education and the Spiritual Revolution. Sant Bani. Sept. 15-26.

Petit, C. (1987). Hotter Estimate on Earths Core. San Francisco Chronicle. April 20. p.9.

Popescu, P. (1991). Amazon Beaming. New York. Penguin Group.

Prigogine, I. & Stengers, I. (1984). Order Out of Chaos: Man's New Dialogue with Nature. New York. Bantam Books.

Pyle, J.L. (1974). Chemistry and the Technological Backlash. New Jersey. Prentice-Hall, Inc.

Ranzi, C. (1982). Seventy Million Years of Man. New York. Greenwich House.

Ratner, J. (1939). Intelligence in the Modern World: John Dewey's Philosophy. New York. The Modern Library.

Reed, A.W. (1987). Aboriginal Legends: Animal Tales. Melbourne. Reed.

Riesman, D & Stadtman, V.A. (1973). Academic Transformation in Seventeen Institutions Under

Pressure. New York. McGraw-Hill.

Roads, M. (1987). Talking With Nature. Tiburon, Ca. H.J. Kramer Inc.

Roszak, T. (1993). Beyond the Reality Principle. Sierra. Spring. 59-80.

Rudenko, S.I. (1961). The Ancient Culture of the Bering Sea and the Eskimo Problem. Toronto. Univ. of Toronto Press.

Sagan, C. (1977). The Dragons of Eden: Speculations on the Evolution of Human Intelligence. New York. Random House.

Sarton, G. (1952). A History of Science: Ancient Science through the Golden

Age of Greece. New York. W.W. Norton & Co.

Schneider, S.H. (1993). A Better Way to Learn. World Monitor. 6. 31-36

Segal, K. (1992). Thematic Option:Core Curriculum. USC. Brochure.

Sevigny, M.J. (1984). Educational Criticism and Shamanism. Studies in Art Education. 25. 185-190.

Singh Ji, S.A. (1980). Education and Discipline. Sant Bani. Nov. 29-32.

Spindler, G.D. (1963). Education and Culture: Anthropological Approaches. New York. Holt,Rinehart & Winston.

Spring Cove School. (1981). Brochure.

Steiner, R. (1971). Cosmic Memory. New York. Rudolph Steiner Publ.

Steiner, R. (1972). An Outline of Occult Science. New York. Anthroposophic Press.

Stevenson, H.W. (1992). Learning from Asian Schools. Scientific American. Dec. 70-75.

Strayer, J.R. (1955). Western Europe in the Middle Ages. New York. Appleton-Century-Crofts,Inc.

Stromberg, R.N. (1966). An Intellectual History of Modern Europe. New York. Appelton-Century-Crofts.

Sumner, W.G. (1963). Social Darwinism. New Jersey. Prentice Hall.

Svigals, E. (1969). Curriculum Project Report: Humanities. Bureau of Curriculum Development. New York. Board of Education.

Talbot, M. (1991). The Holographic Universe. New York. HarperCollins.

The Waldorf School of Mendocino County. (1993). Brochure.

Three Rivers School. (1986). Brochure.

Tompkins, P. & Bird, C. (1972). The Secret Life of Plants. New York. Harper and Row.

Touraine, A. (1974). The Academic System in American Society. New York. McGraw-Hill Book Co.

Wall, S. & Arden, H. (1990). Wisdomkeepers. Oregon. Beyond Words Publ.

Williamson, R.A. (1989). Living the Sky: The Cosmos of the American Indian. Norman. Univ. of Oklahoma Press.

Whitehead, A.N. (1929). The Aims of Education: And Other Essays. New York. Macmillan Co.

Wolf, F. (1991). The Eagle's Quest. New York. Summit.

Young, L.B. (1983). The Blue Planet: A Celebration of the Earth. Boston. Little, Brown & Co.

Young, L.B. (1986). The Unfinished Universe. New York. Simon & Schuster.

Zukav, G. (1989). The Seat of the Soul. New York. Simon & Schuster.

Additional Reading

Ardrey, R. (1961). African Genesis. New York. Dell Publ.

Baxter, J & Atkins, T. (1976). The Fire Came By. New York. Doubleday and Co.

Burke J. (1978). Connections. Boston. Little, Brown & Co.

Bower, B. (1991). Questions of Mind Over Immunity. Science News. 139. p.217.

Carey, K. (1988). Return of the Bird Tribes. New York. The Talman Co.

Conze, E. (1959). Buddhism: Its Essence and Development. New York. Harper & Row.

Coveney, P. & Highfield, R. (1990). The Arrow of Time. New York. Fawcett Columbine.

Crookall, R. (1961). The Supreme Adventure: Analysis of Psychic Communication. London. James Clarke & Co., Ltd.

Crow, W.B. (1969). The Occult Properties of Herbs. London. The Aqaurian Press.

Davies, P.C.W. (1977). Space and Time in the Modern Universe. London. Cambridge Univ. Press.

de Ropp, R.S. (1957). Drugs and the Mind. New York. St. Martins Press.

Dunn, L.C. & Dobzhansky, T. (1952). Heredity, Race and Society. New York. The New American Library.

Ehrlich, P.R., Holdren, J.P. & Holm, R.W. (1971). Man and the Ecosphere. Readings from Scientific American. San Francisco. W.H. Freeman and Co.

Erdoes, R. & Ortiz, A. (1984). American Indian Myths and Legends. New York. Pantheon Books.

Fell, B. (1989). America B.C. New York. Pocket Books.

Fischer, L. (1963). Gandhi: His Life and Message for the World. New York. The New American Library of World Literature.

Gallert, M.L. (1966). New Light on Therapuetic Energies. London. James Clarke & Co.

Hall, S.S. (1989). A Molecular Code Links emotion, mind and Health. Smithsonian. Jun. 89. p.62.

Heywood, R. (1961). Beyond the Reach of Sense: An Inquiry into Extra- Sensory Perception. New York. E.P. Dutton.

Hughes, E.C., et. al. (1973). Education for the Professions of Medicine, Law, Theology, and Social Welfare. New York. McGraw-Hill.

Huxley, A. (1954). The Doors of Perception. New York. Harper and Row.

Lucas, R. (1969). Nature's Medicines. New York. Award Books.

Lyback, J.R.M. (1925). Indian Legends. New York. Lyons and Canahan.

Margulis, L. & Sagan, D. (1991). Mystery Dance; On the Evolution of Human Sexuality. New York. Summit Books.

Michael, H.N. (1963). Studies in Siberian Shamanism. Canada. Toronto Press.

Muller, H.J. (1956). Science & Criticism. New York. George Braziller, Inc.

Myers, N. (1984). Gaia: An Atlas of Planet Management. New York. Doubleday.

Ott, J.N. (1973). Health and Light. Old Greenich, Conn. Devin-Adair Co.

Pais, A. (1982). "Subtle is the Lord: The Science and the Life of Albert Einstein. Oxford. Oxford Univ. Press.

Pelikan, W. (1973). The Secrets of Metals. New York. Anthroposophic Press.

Peterson, H. (1960). Essays in Philosophy. New York. The Pocket Library.

Rajneesh, B.S. (1976). Meditation: The Art of Ecstasy. New York. Harper and Row.

Regardie, I. (1970). The Philosophers Stone. A Modern Comparative Approach to Alchemy from the Psychological and Magical Points of View. St. Paul, Minn. Llewellyn Publ.

Reisner, M. (1986). Cadillac Desert: The American West and its Disappearing Water. New York. Penguin Books.

Sagan, C. (1974). Broca's Brain: Reflections on the Romance of Science. New York. Random House.

Sagan, C. (1980). Cosmos. New York. Random House.

Steiner, R. (1970). Reincarnation and Immortality. San Francisco. Harper and Row.

Stromberg, R.N. (1966). An Intellectual History of Modern Europe. New York. Meredith Publ. Co.

Toben, B. (1975). Space-Time and Beyond. New York. E.P. Hutton and Co.

Underhill, E. (1961). Mysticsm: A Study in the Nature and Development of Man's Spiritual Consciousness. New York. E.P. Dutton.

Velikovsky, I. (1977). Peoples of the Sea. New York. Doubleday and Co.

Voightlanderk, K. & Lewis, K. (1991). The Alphebet Makers. Waxhaw, North Carolina. The Museum of the Alphabet.

Weltfish, G. (1965). The Lost Universe. New York. Ballantine Books.

Wilson, C. (1971). The Occult: A History. New York. Random House.

Wolf, F.A. (1981). Taking the Quantum Leap. Cambridge. Harper & Row.

Yutang, L. (1942). The Wisdom of China and India. New York. The Modern Library.