

## PARADOX AND TRANSFORMATION

Nancy C. Maryboy<sup>1</sup>, David H. Begay<sup>2</sup>, Lee Nichol<sup>3</sup>

<sup>1</sup> University of Washington, School of Environmental and Forestry Sciences Indigenous Education Institute

<sup>2</sup> University of New Mexico, School of Pharmacy Indigenous Education Institute, <sup>3</sup>Faculty Indigenous Education Institute

*E-mail* wohali7@gmail.com<sup>1</sup>, dbegay@gmail.com<sup>2</sup>, leenichol@earthlink.net<sup>3</sup>

### ABSTRACT

The English term “paradox” is suggestive of a particular Indigenous value of perceiving and understanding in terms of balancing opposites. Paradox thinking points to a series of concepts central to traditional Navajo epistemology and ontology: complementarity, dynamic movement, cyclical balance, and transformation. This matrix of traditional wisdom is positioned in relation to western empiricism – especially the latter’s expression as problem-solving and critical thinking methodologies. It is suggested that one aspect of transformation involves re-visioning the relationship between these two cognitive styles.

**Keywords** : Paradox, Transformation

### Introduction

What would a holistic relationship between Indigenous consciousness and western empiricism look like? What opportunities can we create for Indigenous students to fully value their traditions while working in western educational contexts? To open up these questions, we will examine some of the significant differences and active relationships between the value systems of Eurocentric and Indigenous peoples. These differences are often articulated; however, the *relationships* between these world views are often unknown and unexpressed.

We will use Indigenous terminology to illuminate these relationships, primarily through the Navajo language of the *Dine* (Navajo) people of the American Southwest. This Athabaskan language uses the signifier *saah naaghai bikeh hozhoon* (*SNBH*), which has been used by Navajos for countless generations to conceptualize the relationships of the parts and the whole, and to understand these complex, transformative relationships. At the core of our inquiry will be an explication of how thinking in terms of paradox (rather than polarities) can lead to transformation, both inner and outer. Transformation as we mean it manifests at many levels – cognitive, physical, societal and spiritual.

Although the term *saah naaghai bikeh hozhoon* has been used extensively by the Navajo people, this nexus of concepts can be applied to many other indigenous peoples, through the use of

traditional consciousness and language. One contemporary application of this transformative process is to re-vision and regenerate core educational methodologies. Western education, as practiced in the United States, is geared to inculcate and maintain the values of the dominant Eurocentric society. These values have, to a great extent, superseded the traditional values of Indigenous peoples, leading to a confusing situation within Indigenous cultures. It is our hope that some of the issues and ideas we raise here will contribute to the formulation of new educational models that are supportive of traditional Indigenous consciousness.

### Research Method

This paper has been written by two Indigenous knowledge holders and scholars and one non-Indigenous scholar who is a specialist in the quantum theory works of David Bohm. As is often the case, papers written on Indigenous ways of knowing do not fit easily into Eurocentric frameworks of research design and evaluation. Indigenous wisdom is based on knowledge of interconnections of all things, which is significantly different from western academic and scientific theories of separatism and individual components. Indigenous languages form the foundation of Indigenous knowledge and these languages, such as *Dine Bizaad* (Navajo language) are composed of inherent interrelationships and paradox, along with a strong focus on continuous movement

and dynamic process, which cannot be easily nor adequately transferred into English.

The closest we can come to describing our Indigenous research methodology in academic terms is probably a combination of several research designs, notably a participative framework, based on phenomenological research. Participatory research “offers a voice to participants” (the authors and their community) “and gives them the ability to form an agenda for reform” (Creswell, 2013). This type of research is community based and action oriented. In the case of this paper, we have presented an awareness of Indigenous epistemology and transformative interrelational explanations. As we say, one aspect of this paper is to reveal and assign value to what we might call Indigenous common sense, or Indigenous wisdom, leading to regeneration of core traditional values in the modern world.

Phenomenological research is relevant to this paper since “advocacy/participatory researchers engage participants as active contributors to the research, it is a collaborative experience.” (Kemmis and Wilkinson, 1998)). In this case, we are the participatory researchers, describing life experiences in the context of Indigenous traditional knowledge.

“Phenomenology is an approach to qualitative research that focuses on the commonality of a lived experience within a particular group. The fundamental goal of the approach is to arrive at a description of the nature of the particular phenomenon (Creswell, 2013). Typically, interviews are conducted with a group of individuals who have first-hand knowledge of an event, situation or experience.” For this paper we are the group of individuals as well as the academic authors, who, combined, have the first-hand knowledge and lived experience among the Navajo community, and the world of quantum physics.

## Discussion

### Paradox: Balancing the Opposites

Webster’s Seventh Collegiate Dictionary defines paradox as “a statement that is seemingly contradictory or opposed to common sense, and yet is perhaps true.” For our purposes we would add, not only a “statement,” but also a configuration of circumstances, dynamic states of nature, and any activities that occur within these contexts. Each of these situations may

manifest paradox, in which meaning is “opposed to common sense, yet perhaps true.” Etymologically, paradox derives from *para* (before, alongside of, beyond) and *dokien* (to think). Thus, we can think of paradox as a way of perceiving that operates before, in tandem with, or beyond our “normal” way of thinking.

It is worth noting that “common sense” and “normal” in these definitions are tacitly those of the Greek and Latin forebears of modern Western culture. Indigenous “common sense,” however, is often quite different from its Western correlate. Nonetheless, it is the case that via colonization and education, many indigenous cultures have absorbed Western notions of “common sense.” One aspect of this paper is to reveal and assign value to what we might call Indigenous common sense, or Indigenous wisdom, leading to regeneration of core traditional values in the modern world.

### Paradox

Often one is faced with a situation which at first glance seems to be contradictory or in the realm of polar opposites. Further inspection may suggest that rather than a polarity, the situation is paradoxical. To illustrate this we can look at the concept of violence vs. non-violence, as experienced by many Native peoples of the United States.

During the “Indian Wars” of nineteenth-century America, a band of Cheyenne under Chief Black Kettle was massacred at Sand Creek, near present-day Denver, Colorado. Most of the people in the Cheyenne encampment were elders, women and children. Although Chief Black Kettle raised a white flag of peace, the militia attacked with cannons, rifles, swords, and knives, killing most of the Cheyenne and leaving the remainder dying or mutilated.

Similar historical traumas, such as the Navajo Long Walk and the Cherokee Trail of Tears, have occurred over time, involving most Indigenous peoples around the world. One thread that runs through all these horrific experiences is: how does one respond when faced with this kind of violence? When faced with brutal annihilation we may veer to one of two opposites: either respond with further violence or respond with submissive non-violence. Though these may be natural responses, the Western mind tends to

conceptualize and freeze them into unrelated polar opposites.

By contrast, Navajos have often positioned seeming opposites in a kind of continuum, articulated through signifiers such as *saah naaghai* (negative) and *bikeh hozhoon* (positive). These signifiers are not just abstract, philosophical concepts, but point to living actualities. From a superficial perspective one might say negative and positive are polar opposites, but from a Navajo point of view they are *intrinsically interrelated*, similar to an electrical extension cord with negative (male) and positive (female) charges. Is it possible, then, that violence and non-violence are inherently related, not “opposites”? This is the beginning of paradox thinking.

Most people would agree that it is a natural human response to protect one’s family and community from harm – to fight back – even when one wishes to live in peace. But how are we to keep the momentary, natural impulse to fight from becoming a black heart, that is, a habit or predisposition toward violence? This question applies both at the individual level, and also at the cultural level, especially when being on a “war footing” becomes endemic to cultural functioning. Values can create a society rooted in wisdom, happiness, peace and balance, what Navajos would call *hozhoon*. By the same token, values can create a society rooted in selfishness and greed, control and ignorance, what Navajos might call *tsi’ a deesdei’*- (the mind of society has gone astray), which can culminate in *tsi’ da ol dah* (living the imbalances of life in a state of chaos).

Whether an indigenous group was at peace or on a war footing, the people tried to live through an acknowledged dynamic balance. Long before the formation of the United States’ federally-created tribal government, Navajos had a purely traditional and centralized form of government, called *Naachiid*. This was composed of *Hashke Naat’a* and *Hozhooji Naat’a*, war leaders and peace leaders. During wartime the war leaders were somewhat restrained by the peace leaders and they also had an inherent personal responsibility to create a balance. During peacetime the peace leaders had more influence over matters. They also had an inherent responsibility to maintain balance, which would include taking up arms to defend themselves when necessary. Even though they were

providing leadership during peacetime, they had to look ahead for the survival of the next generation.

This notion of balance is similar for many indigenous peoples. The indigenous concept of striving towards dynamic balance usually guided society. This can be further explained as the balance of the male energies (negative) and female energies (positive). In every situation, the complexities of dynamic balance allow things to continue to move forward, or as Navajos would say “yee as’ah naaghai.”

### **Polarity**

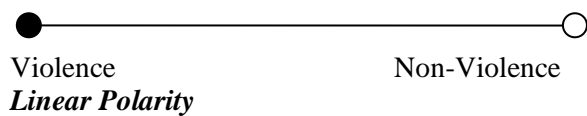
The questions raised here about violence/non-violence, male/female, and negative/positive provide an opportunity to highlight some of the mostly unspoken yet fundamental assumptions of the Eurocentric paradigm. Unlike Indigenous ways of knowing that occur largely through a cyclical paradigm, Eurocentric epistemology is usually based on a linear perspective, which allows for a certain way of organizing thought processes and the articulation of such processes. With a linear perspective, for example, one can discuss such concepts as progression and time. This allows for a world configured in terms of beginning, middle and end, or, said another way, past, present and into the future.

The Eurocentric linear paradigm often categorizes things in terms of opposites and discrete parts with little or no emphasis on the relationship of the parts. This perspective is rooted in the historical development of Cartesian philosophy, which makes up the knowledge base of most western-centered education systems across the world. Indeed, western culture follows the lead of western science. If Cartesian philosophy is the foundation of much western science, then this philosophical outlook filters into the culture, structuring the perceptions of the average person at a tacit and unrecognized level.

The linear paradigm is uniquely and appropriately expressed through the English language and its linguistic relatives, the Latin-based languages. The grammatical organization of English is largely noun-based, and lends itself to linear thinking as well as to oppositional concepts such as polarity. Indigenous languages, on the other hand, are largely verb-based and relationally organized.

Polarity-based thinking, for example, will typically conceive the seeming opposites of

good and bad as mutually exclusive, with little or no intervening gradation. Something is usually either good or bad. This polarized division has created an underlying set of values, often resulting in a blame-based society where “I am right and everyone else is wrong.” The manifestation of this kind of polarized finger-pointing has been used by countless governments to justify violence and acts of aggression.



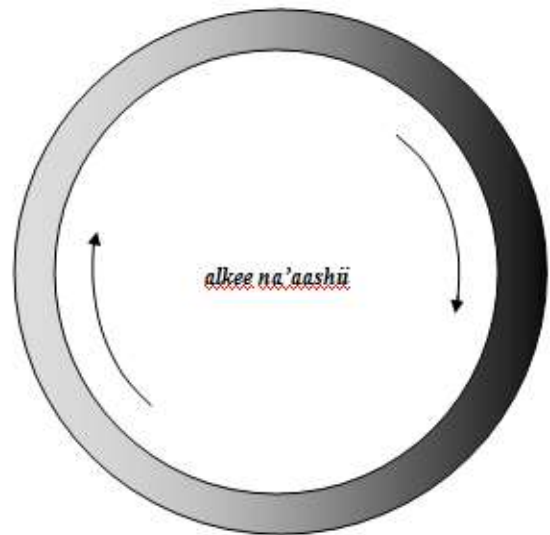
**Continuum**

The concept of continuum is often visualized as a way to illustrate polarity. From a Eurocentric perspective, a continuum is most often linear with violence on one end and non-violence on the other, as illustrated above. What may at first glance seem to be oppositional, can however be seen from an indigenous perspective as a *merging* continuum, understood as a dynamic complementarity of life.



**Merging Continuum**

If one takes each end of the continuum line above and pulls each one around to the top or the bottom, one will create a circle, a *cyclical* continuum. From the indigenous perspective, this connection of both ends of the *merging* continuum turns the linear structure into cyclical movement. This in itself creates a different epistemological and ontological consciousness, one which reflects natural processes. For example, *alkee na'aashii*, translated as “one follows the other,” implies that a dynamic equilibrium emerges, as illustrated by the arrows in the following diagram. There is no hierarchy or polarity in this order, similar to the unified cosmic process inherent in the natural cycles of night and day. Dynamic equilibrium is innate; it emerges, becoming visible and clear to the human consciousness.

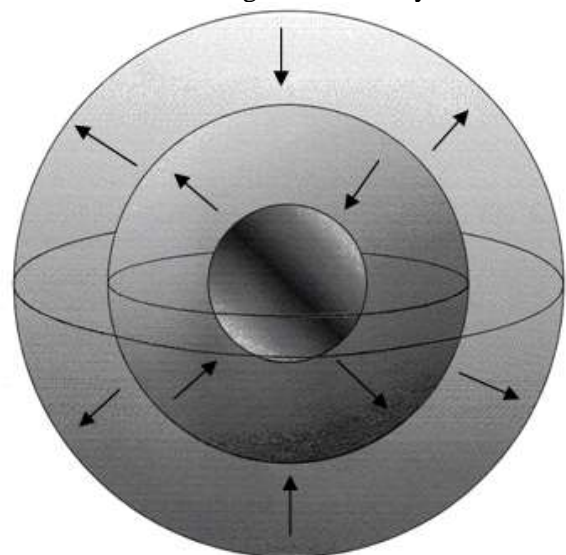


**Cyclical Continuum**

*Alkee na'aashii* cannot be considered as a polarity or linear continuum. If the circle is broken and reverts into a continuum with left and right poles, then the polarity re-emerges and you no longer have the unity as indicated through *alkee na'aashii*.

**Values as an Ordered Continuum**

We can take this evolution from polarity to *alkee na'aashii* one step further by introducing *values*. So far we have brought out concepts of increasing complexity but have not explicitly addressed the issue of value. The following diagram shows one way of indicating an ordered continuum in which some things have higher value than other things – a hierarchy of value.



**Enfolding-Unfolding Spheres**

The largest (outermost) of the three spheres indicates the entirety – the wholeness – of traditional Indigenous knowledge. The middle sphere illustrates the fullness of the traditional knowledge being somewhat narrowed down but still retaining the dynamic flexibility of the outer sphere. The innermost sphere represents highly specific applied knowledge (polarity-based) that is nonetheless governed by the outer and middle spheres. The largest sphere has the most value to Indigenous peoples because it holds the greatest wisdom, intelligence and knowledge. To attribute this level of knowledge, as is often done in western cultures, to only the smaller inner sphere of specific applied knowledge, is breaking the natural holistic order and turning it upside down. (Please remember – these are not three concentric circles, they are three-dimensional spheres nested within one another). When the relationship between these various levels of knowing is functioning coherently, each level is continually communicating with the other, from “higher” to “lower” and “lower” to “higher.” This movement of information is similar to what physicist David Bohm describes as a process of *enfoldment* and *unfoldment*. (Bohm 2003, pp. 78-139 passim)

### **Complementarity**

Often the concept of polarity is discussed in terms of dialectical tensions. Yet even this term illustrates the difference in thinking between Eurocentric and Indigenous, as seen through a Navajo perspective, and explained through the term *alkee na'aashii* (one follows the other), implying continuous motion without anything coming first or a second. This is similar to the Chinese yin/yang symbol illustrating an Eastern view of interrelationship, which, like Navajo, is not oppositional thinking, but rather a system of complementarities.

### **Dynamic Movement**

The Navajo term, *alkee na'aashii*, expresses dynamic unbroken movement. This is not necessarily the case with western concepts of complementarity. With full complementarity, as defined by Navajo, there is neither hierarchy nor polarity. The emphasis is on perpetual *movement between the two* (the “two” being what appear on the surface as polar extremes, for instance night and day, violence and non-violence). Both energies are needed for dynamic

movement. *In the unity of the dynamic movement, the polarities naturally disappear.*

The Navajo world accepts diverse ways of knowing in the sense that each culture holds its own relevant ways of knowing as expressed through its characteristics and lifeways, articulated through spiritual songs. Like the Navajo, most Indigenous people are spiritually grounded in specific geophysical and celestial environments. Navajo cosmology is centered within their Four Sacred Mountains. Star constellations and other dynamically moving celestial objects visible from this location provide the natural holographic order underlying Navajo cosmography. This order is indicated by the largest, outermost sphere in the diagram of Enfolding-Unfolding Spheres. The dynamic movement of this order – referred to by the Navajo term *nanit'a*, is also hinted at by David Bohm's term *holomovement* (Bohm 2003, pp. 78-80; 131-136).

Geophysical and celestial location, as well as consciousness of all living things, are intrinsically related with everything in the Navajo cosmos. The underlying knowing, the spiritual matrix - what Navajos would call *bitsi silei* – that provides the preceding organizing process for the Navajo world view, is the essence expressed through *sa'ah naaghai bikeh hozhoon*. This is the self-organizing central process that provides unity, coherence and life. It is the spiritual matrix that binds the human with all cosmic forces and energy.

Implicit in *SNBH* is a cosmic negative and positive complementarity. Where the two energies meet, a central dynamic force is constantly manifesting, where equilibrium and dynamic movement are continuously generated and regenerated. Navajos refer to this central life-giving process as *as'ah naaghai*. Navajo traditionalists say the relationship between two polarities provides the continuous manifestation of dynamic balance. One cannot exist without the other. They depend on one another through interrelationship, much the same as electromagnetic forces require both negative and positive charges.

### **Balance (Teaching from the stick)**

How does one come to understand and live this indigenous balance? To live in terms of balance generates a different engagement than that which flows from western dependence on

prediction and control. One way to simplify or personalize the interdependent relationship of balance is in terms of the human walking process. In order to create and maintain the necessary central balance inherent in the human walking process, one needs to use a left leg and right leg in continuous succession. This example may seem simplistic, but it points to a profound cosmic natural law. Such balancing of opposites is harmonic, a dynamic gift of life.

A further, perhaps more graphic example, is the dynamic energy required to balance an upright stick in the palm of the hand. This energy is expressed in Navajo as *yee as'aa naaghai* (the means by which dynamic movement manifests and maintains, allowing a continuous cyclical motion). The complex sensitivities and feelings required for this movement can be fully understood by *actually getting a stick* and performing this activity. The stick should be 3 to 4 feet in length (about 1 meter), with the diameter approximately like that of a broom stick. Once the stick is vertically balanced in the palm of the hand, the final step is to move around in a fairly large area and *maintain the balance* of the stick in the palm. The point of this exercise is to *feel* the teachings and the principles inherent in the concepts of dynamic balance as explained above. This exercise is so direct that for many people it will demonstrate more about *yee as'aa naaghai* than could any written work.

In doing this exercise, if you go astray from the balance, the stick will fall over. To create that balance, you have to do what you have to do (do it and find out!) You are in a different time and space each time you do this. Suddenly, dynamic movement and balance are inseparable. You are forced to work with the concrete realities of time and space. This kind of balance is radically different from western concepts of prediction and control. What kind of mind, whether it is individual or collective, can accommodate a world in which time and space is never the same twice? Can we educate, nurture, and support the kind of mind that apprehends and accommodates such a moving, dynamic world?

### Wisdom

Indigenous wisdom has evolved from the teachings and principles inherent in such a moving, dynamic world. Wisdom does not just appear in a void. In the Indigenous way wisdom

is based on generations of knowledge, close observation of natural order, and a cultural and spiritual consciousness articulated through traditional holistic language. From this construct develops an indigenous consciousness specific to place and time. A highly complex cultural knowledge develops from this evolution, and from this knowledge, wisdom is generated. Wisdom becomes what Navajos would call "seeing the form," *jo'inigii bee nitsisikees doo bee njint'a*, which makes up an indigenous epistemological and ontological nexus.

As often happens, when we go back to the original Greek and Latin roots of English words, we find that the root is strikingly similar to the Indigenous meaning. In this case, one of the oldest meanings of wisdom comes from the Greek *aidos*, which means "appearance" or "form." Related to this concept of appearance or form is *idein*, a Greek word meaning "to see." By extension, when you put these meanings together, you can *begin to see the form*, see deeply how things are put together - very similar to the Navajo interpretation of wisdom, "seeing the form." From an indigenous perspective, values are a manifestation of this wisdom.

In order to deepen the understanding of values from an Indigenous view it may be helpful to briefly juxtapose the concept of values from a Eurocentric and an Indigenous perspective. Scientific theory works by taking things apart and analyzing them and reconstituting them. Western science, unlike indigenous ways of knowing, tends to divide information into discrete parts. This in itself becomes a value. It can be called fragmentation, compartmentalization or measurement.

Here it may be instructive to look at the root of the word "value," which comes from the Latin *valere*, meaning "to be strong, to be worth." David Bohm, who was deeply concerned with how values manifest in modern culture, comments,

"The word 'value' has the same root as 'valor' and 'valiant' - it means 'strong'... Whatever gets supreme value mobilizes the system [the individual or the society] and drives it with total energy." (Bohm 1996, p. 67)

Thus, both "value" and "valor" suggest a driving force that gives vital energy to the life of a person or a culture. We would suggest that for western culture, this driving force, this deep

metaphysical value, is the impulse toward fragmentation. Indigenous knowledge, in contrast, has traditionally given deepest value to the inherent unbrokenness of the natural world in all its multiplicity of forms. It is unfragmented in its basic outlook; its beauty, power and strength (value) come from perceiving the world in this unique way.

Another manifestation of indigenous wisdom is active intelligence. From this perspective intelligence provides the means to select among many choices. The word “intelligence” comes from the Latin *inter* (“between”) and *legere* (“to choose, select or gather”). This suggests an activity in which the entire nexus of Indigenous wisdom is brought to bear in a specific context or situation.

### **Problem-Solving and Critical Thinking**

We have seen that paradox thinking is a portal to an entire matrix of Navajo wisdom. However, in the search for the sustainability of indigenous cultural values, indigenous students in Western educational contexts invariably encounter a cognitive style that not only differs from paradox thinking, but is often situated to undercut or eliminate paradox thinking and all that it implies. This cognitive style – closely aligned with the scientific method – is the problem-solving/critical thinking methodology.

Brenner and Parks (p.217) have identified a series of variances between Eurocentric problem-solving / critical thinking and indigenous cognitive styles.

Many cultures, including Native Americans, typically value holistic rather than analytical types of thinking. They view all things as connected and think in terms of general principles or seeing the big picture... In Chinese culture, dialectic tensions that Westerners see as opposites – for example good versus evil and right versus wrong – are seen instead as complementary. The yin and yang illustrate not simply opposites, but the balance or harmony of the whole – the unity of the two (Chen 1998). Ho (1998) draws attention to the Filipino concept of “pakapa-kapa”, or groping, as a general way of problem solving that encourages approaching problems with

no preconceived notions or questions, as blank slate, “as if one were in a state of total ignorance.” (Ho, p. 97). This approach, grounded in a sense of shared identity and connection with others, is similar to what Hvolbek (1992) describes as a meditative type of thinking, developing full awareness of the moment, and avoiding analysis and categorization, while being fully present and passively contemplative rather than actively investigative.

And significantly, regarding the raw material or “data” used to navigate the world, Brenner and Parks (p.219) point out that:

All cultures rely upon information, but data and credible sources may be defined differently. In Western culture evidence is drawn from scientific research, experts and authorities, or books. In collective cultures, wise elders – referred to by the Lakota as “living libraries of knowledge” – are sources of information. In oral cultures, decision making is informed by stories prized for reflecting the values and wisdom of generations (a coded wisdom). Polynesian navigators developed keen sensitivity and accuracy in reading patterns in seemingly unrelated signs, information that western science traditionally regarded as chaotic (Witt-Miller, 1991).

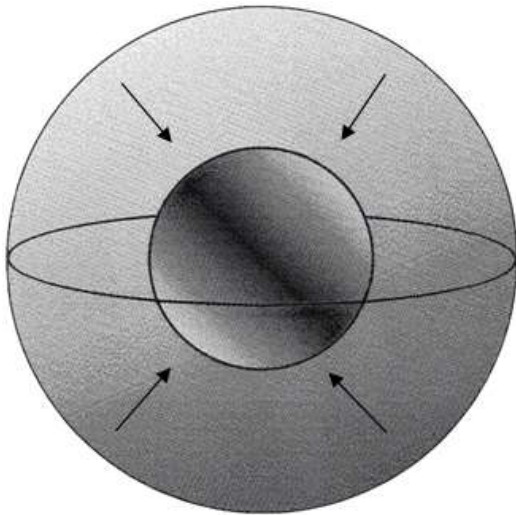
This “information that western science traditionally regarded as chaotic” is precisely the *order* perceived by many indigenous cultures, the matrix that informs their most deeply held values. The difference here is that western methodologies (scientific, problem-solving) are facile at excluding information in order to narrow the parameters of the problem at hand, while indigenous traditions emphasize taking into account a far broader spectrum of information at any given point.

Our experience in a variety of educational contexts has been that institutions administered by westerners have little interest in addressing this disjuncture – and to the extent they do, they employ the very methodologies that are in question here. The limitations of this approach are self-evident. On the other hand, in institutions administered by Native Americans, the tendency thus far is to “integrate” the two world views. On its face, this approach seems sensible enough. But the deeper import of such “integration” is to do justice to *neither*

approach. The integrative approach can diminish the integrity of both disciplines, as they are distinct and different from one another and each stands on its own intellectual merits.

In our view, there is a precisely ordered relationship between the problem-solving mind and the more expansive holistic mind, an order which is rarely recognized and even less often articulated. But the articulation of this order is essential if the educational contexts of indigenous students are to evolve with the creative dynamism which is inherent in their traditions.

The diagram below may be useful for considering the order we are proposing



### ***Wisdom Matrix Informing the Problem-Solving Mind***

The larger of the two spheres depicted here represents the matrix of aboriginal wisdom we have discussed at length in this paper. The smaller of the two spheres represents the methodology of western problem-solving. The nested nature of the spheres indicates “higher” and “lower orders” – the aboriginal matrix being a more comprehensive order, while the western inner sphere is a more limited – though extremely powerful – order.

When the cognitive processes of the western problem-solving method flow *from* the larger matrix of understandings, the “two” approaches are really not two, and thus are not to be “integrated”, because they were never separated to begin with. The deeper holistic knowings naturally “govern” the more limited empirical

knowings. This in fact is historically the case with indigenous cultures. There is ample evidence of empirical thinking in all Indigenous cultures, an aspect of thinking in which the narrowed vision of problem-solving is vigorously exercised. The crucial point here is that the narrowed empirical vision is occurring in dynamic relationship with the wisdom matrix, sometimes consciously, sometimes unconsciously.

Today the more common configuration is one in which empirical problem-solving has been isolated and detached from broader traditional knowing, as is the case in western traditions. In this case a portion of thinking has cut itself off from its own foundations and pretends that whatever exists outside its field of vision is either non-existent or irrelevant. The implications and practical consequences of such fragmentation are pervasive and wide-ranging.

This fragmentation is not a *necessary* feature of empirical thinking; indigenous cultures have traditionally moved with ease between the holistic matrix (Brenner and Parks’ “chaos”) and the more narrow, “practical” perspective of problem-solving. Working from this model, it may be possible to re-vision the manner in which critical thinking is defined, interpreted and taught – not only to indigenous students, but to Western students as well.

### **Transformation**

The dominant society is currently governed by a tacit infrastructure of polarity thinking which artificially freezes and divides the forms of the living world. This kind of thinking has become a major foundation of global educational pedagogy. If the world is going to shift from this type of education to a more holistic approach, as illustrated in the diagram “Wisdom Matrix Informing the Problem-Solving Mind,” a major transformation needs to occur.

The outermost sphere illustrated in the “Wisdom Matrix” diagram indicates the whole of Indigenous knowledge. This knowledge has been marginalized and discounted in most educational systems of the dominant society around the world. There is currently a great emphasis on the importance of problem-solving in Eurocentric pedagogy, which is totally cut off from the wholeness of traditional knowledge. This disconnect between Indigenous and western values should be seen clearly for what it



is, and must be regenerated through new, inclusive models, in order for contemporary students to succeed.

Transformation may require revitalization of ancient wisdom, values, and principles. This process could require re-definition of ancient values within contemporary indigenous wisdom, values that are applicable to the present generation of indigenous people in modern conditions and environments. Identity, or self-identity, of indigenous people, revealed through a re-definition of the current value system, may determine to what extent indigenous ways of knowing can truly provide some means by which indigenous and non-indigenous people can go beyond the status quo.

Language, fluency and intensive cultural knowledge may not always be a necessary precondition to exploring recommendations based on principles and models (diagrams) such as those we have provided in this paper. However, the authentic wisdom embedded in the traditional languages can still inform and guide transformation. Each indigenous community is distinct and different from others, using its own organized knowledge base with which to discuss and define values through community-based wisdom.

Values, as historically lived and experienced, come in many shapes and carry varied definitions unique to place and time. The process of change and transformation requires going backward and going forward simultaneously. Transformation, through this paradox, requires drawing on ancient epistemological roots and the accompanying wisdom to develop a shared contemporary definition of values to improve education and decision-making in all facets of the life process.

### Conclusion

In this paper we have discussed re-visioning the relationship between two major cognitive styles: traditional Indigenous wisdom and Eurocentric empiricism. We have created several diagrams to illustrate a mutual and holistic relationship between the two ways of knowing. We have gone into some detail of the traditional Indigenous consciousness as it is less known and understood in the western academic world. The paradox thinking of traditional Indigenous wisdom (in this case that of the Navajo) of balancing opposites, with emphasis on the value

of relationships, can be a useful tool for transformation and for reconnecting the historic disconnect between Indigenous and western ways of knowing and living.

It should be noted, however, that none of the concepts or models we have presented are intended as fixed or final. Their value, such that it may be, is in encouraging new ways of fluid thinking and creative understanding.

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Diagrams by Eva Casey

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