

**Vygotsky and Indigenous Cultures:
Centuries of Language Centered Learning.**

by

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The primary finding of the Keresan concept of giftedness is that the special or unique talents, abilities, traits, and characteristic are reflections of a complex society which views the physical universe quite differently from mainstream society.

--Mary E. Romero (1994).



Figure 1 : Chiricahua POWs at Mt. Vernon, Ala

Introduction

We will begin exploring the theoretical analysis of Culture Based Education element number six as defined by William Demmert (Demmert, 2001): Knowledge and use of the social and political mores of the community. Examining the social and political mores of indigenous communities and the dominant society, the core of this story begins comparing the inherited and established practices with Vygotskian theories and indigenous cultures in education today.

Vygotsky has “turn(ed) Western tradition on its head,” as Dr. Jim Lantolf stated in his introduction to social cultural theory on October, 2003 at the LRC Brown bag series. Vygotsky approach to education supports what many indigenous nations have been saying for centuries: Western tradition has been in direct opposition to Indian tradition. Researchers such as Mary E. Romero, Jerome Bruner, Teresa McCarty, and many others have focused on “theorizing from practice” as an approach to valuing indigenous education. Luis Moll calls these approaches, “trends in action” (2001), which incorporate the Vygotskian educational model. These teaching methods and pedagogies have been a part of indigenous history centuries before the United States decided to assimilate American Indian into the American culture instead of annihilating them. Many indigenous learning models incorporate heritage languages for a powerful reason that language is the foundational structure that links us to our past and ancestry. Language is a crucial element of our social and psychological being.

Lev Vygotsky

Lev Vygotsky theorized that language forms the cognitive tools by which education, formal or informal, is developed. Languages are the social cultural tools which incorporate the acquisition of knowledge across the dynamic domains of human development: phylogenesis, ontogenesis, and social-historical theory. Phylogenesis is the evolution of the human species. Ontogenesis is dependent on the genealogy of the parents. Social cultural is dependent on the era a child is born into and that culture that has developed. Without language we could not further analyze or explore the ideas, experiences or the history of being human. We could not bring the ancient knowledge of

our ancestors into our contemporary experiences. This approach to education incorporates and acknowledges individuals’ unique dynamic cognitive development within society and ancestry .

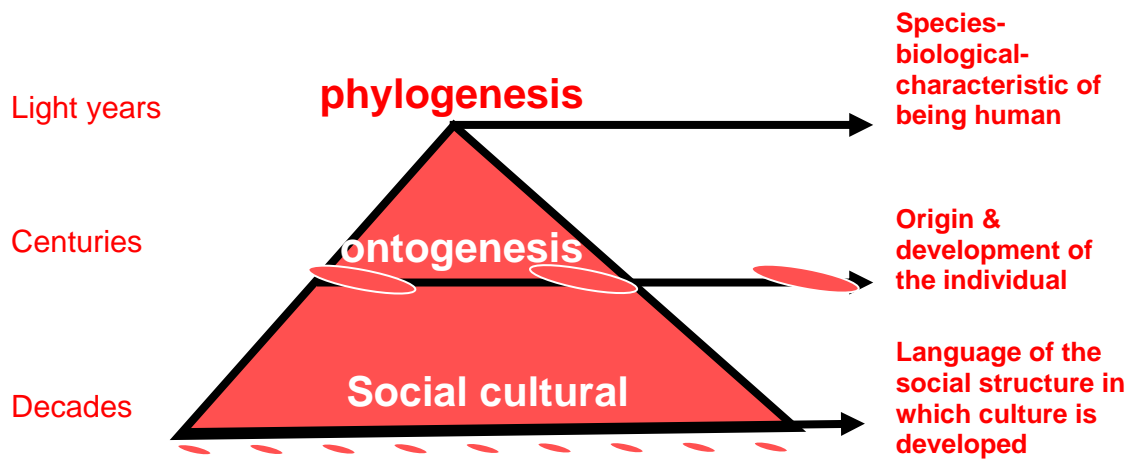


Figure 2: Vygotsky’s timeline of cognitive development of the mind in society is represented by the black lines. The base of Vygotsky’s theory broadens to include the present cultural environment of the individual (child). The sides of the triangle are timelines moving from the present (the base) to the past (pinnacle), with each side representing the genetic and historical makeup of the child. The pinnacle is the ancient past. The third circle outside the triangulation represents the disassociations of language and culture.

The dynamic cognitive development of the individual is also dependant on the social interaction of the individual in society and the teacher or elder who is transferring that domain of knowledge. The Vygotskian theory of socially shared cognition is juxtaposed to Western pedagogy or the American Public school system which views cognition “as a set of internal mental processes accessible only to the individual” (Bodrova E. & Leong, 1996; Vygotsky, 1978). This linear hierarchical thinking creates a power struggle and conflict for most American Indians since knowledge is appropriate through the social structure which is dependent on time and social participation for acquisition and mastery. The knowledge or internal mental processes are accessible

though direct experience and observation within the community, family or home environment. The accessibility is not limited to the individual but is a dynamic analysis occurring with each interaction between the individual and society.

The Indian tradition is a not a linear hierarchy pedagogy like Western tradition. The Western tradition is linear hierarchy pedagogy and most Indian traditions are spiral or circular with a hierarchy which is not noun based or ownership centered, but based on personal experience and continual in-depth analysis of a topic. This does not mean that a hierarchy does not exist, just that the reference point is different. A question posed by Bruner is, “Should schools aim simply to reproduce the (dominant) culture, to “assimilate” the young into the ways of being little Americans (Good consumers)...?” (Bruner, 1996)

The domination of Western society is established through the early educational system of the common public school and/or boarding schools for the American Indians. The assimilation began with the punitive punishment of speaking one’s heritage language and the retelling of our nation’s history with the omittance of the original people who inhabited North America. When telling a story we shape the historical references to each society within the dominant political structure. The core meaning of a story is drastically changed through omission of the societies that have negotiated treaties with the Untied States. Without our stories, it’s easy for prejudice, misunderstanding, apathy and hostility towards indigenous nations and their people. At the core of every story is language.

The next step was replacement of cultural values through trade and service orientated occupational education which would not compete with the elite class. Western science has, for the most part, renamed, acquired and incorporated indigenous knowledge without referencing their original source. The systematic compartmentalizing and fragmenting required by quantitative experiments usually lead to a “rediscovery” of indigenous knowledge based in the environmental setting of the land. The selective and unacknowledged “discovery” of indigenous technology devalued indigenous peoples’ home and society and is a formative way of vanquishing our existence. The incorporation of Western values was systematical and literal drill into our aunts and uncles, grandmothers and grandfathers through military training which uses regulated time and routine scheduling to break down any resistance one has to authority.

The Carlisle Indian Industrial School was the first off-reservation boarding school and began the social experiment of assimilation of Native Americans into American culture. For almost 40 years, from 1879 to 1918, the school sought to civilize "savage" Indian children. Richard H. Pratt, founder of the school, believed that the school was the solution to the "Indian problem." To successfully carry out the mission to assimilate and rehabilitate, Pratt believed that the school must "Kill the Indian, save the man." To achieve this goal, totalitarian methods were employed, and all aspects of life were controlled. All traces of Indian culture were removed from the view and memory of students. Students were given new Anglo names, and they were forbidden to speak their native language. Boys' hair

was cut in the Anglo fashion, and Indian dress was replaced with military uniforms. Girls were given Victorian-style uniform dresses and shoes. During summers, students were placed with Anglo families instead of returning home. Students spent half the day at scholastic study, primarily learning English, and the other half pursuing vocational training. By total immersion in Anglo-American culture, students internalized the belief that Whites were culturally superior. Pratt believed that the goal of the Carlisle Indian Industrial School, to assimilate and rehabilitate Indian students, was successful. (Satterlee 2002)

Pratt's success of "assimilation and rehabilitation" is another way of saying cultural genocide was achieved. The affects of his pedagogy is still apart of every Indian's heritage and can be seen today. The authoritative and competitive pedagogies of the common public school were designed for people of our great nation who are considered inferior to the dominant or elite class. As the cognitive skills needed by the service and labor industry to support and supply the dominant or elite class with skilled technicians increased, the need for specialized education for the public also increased. Oakes and Lipton (1999) discuss the emergence of the "common public school" and the historical social development of the United States' definition of what American culture and intelligence is.

From the nation's beginning, schools have been at the center of efforts to create social change and upheaval. The main social task of the common

schools in the early nineteenth century was to impart to youth values such as honesty, civic loyalty, hard work, and charity—all considered essential for the national unity, republican government, and social progress. Schools at the turn of the twentieth century sought to assimilate immigrants and teach the habits and skills needed for factory work (Oakes and Lipton, 1999, p 28).

Paulo Freire said, “Education is a political act (Cox, 1990).” The issue is not the “youth values” or traditional mores, but the obedient assimilation and need for common labor. With the stage set for the conflict that arises between the American Indians and Western elitism, a new perspective on teaching comes from Vygotsky cognitive development theories. These theories are unbiased in class dominance and are a refreshing pedagogy which is consistent with indigenous cultures, validating culturally related curriculum and language based cognitive knowledge using scientific research in humane relationships. While the majority of scientific research in the history of the United States has attempted to strip us of our dignity, life ways and heritage language, Vygotsky uses scientific research to support culturally appropriate curriculum in promoting cognitive development or intelligence.

“Western Tradition’s” concept of intelligence has been supported through the work of theorists Jean Piaget and Samuel G. Morton. While Piaget supports “Western Tradition” with the internalization of cognitive development flowing from the individual to the group mind development, Vygotsky believes the natural flow is from group/culture

to the individual's "tools of the mind" (Lantolf, LRC 2003). The mind uses language as a tool for strategies, memory, location and orientation of the body in the physical universe. The "tools of the mind" are developed through language, and that language is effected before the birth of the individual through the dynamic domains of phylogenesis, ontogenesis, and social-historical. The cultural context is developed and on going before the individual is born. "Tools of the mind" are inherited through one's parental guidance and the social context of a child's first four years of life.

Standard discussions of the difference between Vygotsky and Piaget place a crucial difference in the proximal locus of cognitive development.

According to the canonical story, for Piaget, individual children construct knowledge through their actions on the world: *to understand is to invent*.

By contrast, the Vygotskian claim is said to be that understanding is social in origin (Cole and Wersch, 1994).

Another interesting correlation between Vygotsky's theories and Indigenous cultures is the idea that memory is shared between two people. The idea of socially shared cognition is parallel to cognitive development theories in indigenous cultures, it's most visible form is story telling. The dynamic exchange between the elder/teacher and the child/apprentice occurs when the memory is accessed and constructed through the dialog between them. This exchange is the social context that Vygotsky saw a vital to cognitive development. The social context of being present and participating is vital in understanding Indian communities and acquiring access to their knowledge domains.

What a startling difference in the scientific analysis between Lev Vygotsky and Samuel Morton. Morton's theories were the basis for an anthropological methodology which promoted the white race as being a more highly evolved superior race and was based on how many seeds fit inside the skull of the dead. The scientific research of indigenous people is a bitter taste in one's mouth as a result of the colonization, assimilation, and education that has been imposed on us in the name of discovery, science, and education. Linda Tuhiwai Smith eloquently summarizes,



...a history that still offends our deepest sense of our humanity. Just knowing that someone measured our 'faculties' by filling the skulls of our ancestors with millet seeds and compared the amount of millet seed to the capacity for mental thought offends our sense of who and what we are (1999, p 1).

Language Centered Learning

“Orientation is everything”, Gregory Cajete (LRC Speakers Series, 2005).

Without language we could not further analyze or explore the ideas, experiences or the history of being human. Can you imagine a physicist trying to talk about nuclear fusion without the language based in that field of knowledge? When education displaces

the learner from their environment and culture by restructuring their experience through the dominate society's language and culture, there is a disassociation and break in their cognitive development social-cultural history. This break in the psyche is described by Tommy Begay as a trauma in the cultural-historic fiber of being Indian which needs to be healed through active participation of the people it affected (Begay 2003).

Our educational system continues to displace the learner from their environment through the lack of language scaffolding from the home to the school. Similar to a physicist trying to explain nuclear fusion to my grandmother in Apache, the transference of knowledge is not likely to succeed. The main reason is that both are limited by a language which has no scaffolding in their pre-existing domains of knowledge. The physicist does not know the specialized language of Apache, if any, to explain the nuclear fusion, and my grandmother did not receive the higher education degree needed to access the specific language of physics. The bridge between them has not been co-constructed so the social exchange of ideas can not occur. A co-construction/dynamic analysis of a language bridge is necessary for a dialog to occur between knowledge domains.

Children attending a public school are learning a new language and social more. This academic language and social mores change and develop through out the process of a formal education.

We are at the base of the Vygotsky pyramid in present time but our formal education ignores our origin stories- phylogenesis and our parental influences/funds of

knowledge/ontogenesis. The way we learn a new language is important for comprehension and cognitive development. Once we can scaffold our learning onto existing knowledge or when we are not burdened with creating a conception of an idea or description, our understanding and knowledge increases by at least 20%. “However complicated any domain of knowledge may be, it can be represented in ways that make it accessible through less complex elaborated processes” (Bruner, 1996: XII).

Richard Donato’s article *Collective Scaffolding in Second Language Learning* (see Lantolf and Appel, 1994), illustrates how scaffolding is a social co-construction of second language (L2) acquisition. Donato uses a Vygotskian method called microgenetic analysis which is the gradual acquisition of skills in the second language (L2).

Donato observed directly how students help each other during the overt planning of L2 utterances and the outcome of these multiple forces of help as they come into contact, and interact, with each other. The power of the collaborative experience has support in Vygotsky’s developmental theory (1978), which maintains that when learners are actively assisted in dialogic events on topics of mutual interests and value, individual and conceptual development occurs. (1994, p 42)

The study demonstrates how incorrect and incomplete knowledge was used in a collective memory of the students and mediated through language which scaffolds the correct knowledge with the learners’ dynamic dialog. The learners’

dynamic dialog was a co-construction of the definition and pronunciation of words. The learners reconstructed meaning by piecing together the parts they each remembered and latticing the domain of their knowledge into a logical pattern of language. Latticing or a web matrix is the social development and bank of knowledge held by a community. Each community constructs identity and descriptions which has a historical reference or origin. This study demonstrates how the social interaction is important for cognitive development which moves beyond rote memory and into higher mental functions, intelligence.

The key to cognitive development in the individual/child is the dialogic activity which is centered on topics of mutual interests and value (Donato, 1994). An example would be cultural-historic activities that would include the indigenous knowledge base which Luis Moll refers to as “funds of knowledge” (1992, 2000), heritage language, and oral cultural history.

Moll defines “funds of knowledge” as the bodies of knowledge represented in the home or community, but which are not usually utilized in the classroom. In some indigenous communities that would be architecture and construction associated with the building of ceremonial spaces and structures, ecology associated with animal, plant and raw material gathering, historic origins associated with songs, dance, art, religion and astrology.

Vygotskian “tools of the mind” include dynamic analysis which is not only the social exchange between the teacher and learner but includes the transfer and building of knowledge or cognitive development that is mediated through language. In other words, the dynamic analysis occurs because the learner is not a passive participant in acquiring knowledge from the teacher, and the teacher is not a totalitarian with a knowledge base out of reach or outside the domain of learner’s knowledge base. Each dynamically influences and anchors the acquired knowledge in the present through the social exchange mediated by language.

By following the discourse of Vygotsky’s third level of cognitive development: social-cultural. A progression of effective influences in one’s social-cultural history would be:

- History drives Society
- Society drives Language
- Language drives Cognition
- Cognition is dynamic with Language

Let’s revisit figure 2: Vygotsky Timeline of Cognitive Development, with a few indigenous terms incorporated into the model, one can compare the language base in psychology and an Indigenous culture. The Hopi have called different stages of their evolutionary development, worlds, instead of phylogenesis. The Hopi timeline¹ has a different meaning than its literal translation. Like the Russian word for the “idea of

¹ The Book of Hopi: I draw upon this reference not as an authority of Hopi culture or a belief in the accuracy of the historical, spiritual and cultural history of the Hopi nation but to point out the domains of knowledge that exist independent of Western tradition.

teaching” that Vygotsky drew some of his theories on is a different concept than the English word “teaching”. When translating a complex concept across worldviews, we will substitute the closest meaning and may lose the essence of its meaning. If we continue to translate into the dominate society, we will fail to draw upon the wealth of knowledge that has been refined through centuries of indigenous thinking. Solutions and worlds could be lost by assimilating and imposing the dominate language of English only.

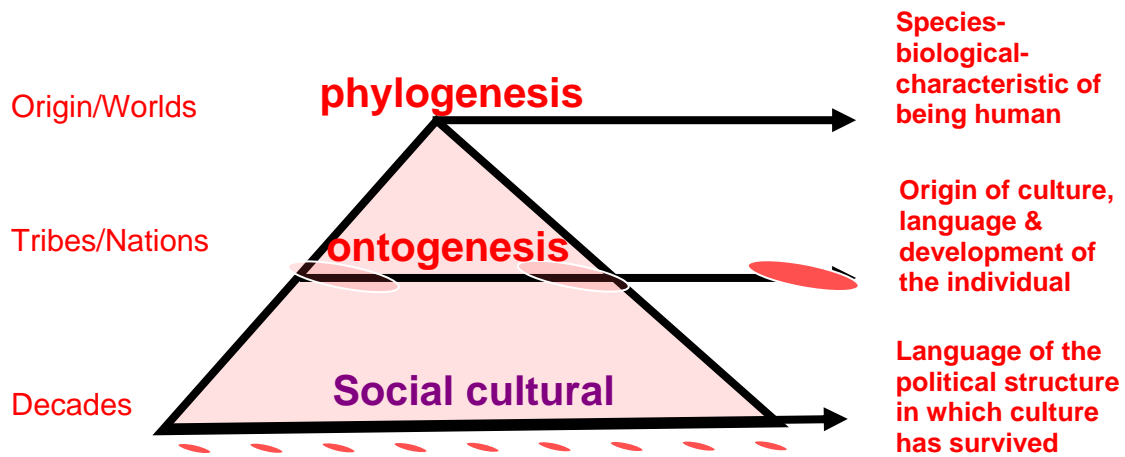


Figure 3: A Vygotsky Timeline of Cognitive Development of the mind in society reconstructed with one indigenous knowledge model. The base of Vygotsky’s theory is in flux with the cultural-historic political environment of the individual (child), especially if the child’s timeline is separated from the parents and the community. This can be seen as cultural historical trauma and is represented by the large circle outside the timeframe. The smaller circles at the base represent the community.

The indigenous knowledge of centuries of language centered learning could be lost through the imposing and translation of heritage languages out of their social context and outside their land based environment. Worlds, in Hopi or Navajo, could be seen as distinct time periods in the origins of their culture, which describe trends in their cultural development. Tribes and nations are a recent assimilation definition using the dominant culture and political nation, the United States. Most indigenous societies translate their

name as meaning, “people.” In generational decades, we can see social-cultural changes occurring with tribes and nations. An example of these recent changes would be second and third generations that do not have their heritage languages due to assimilation and educational policies. The resilience and resistance of these cultures can be measured in high school drop out rates. This is a time when young adolescents are defining themselves and exercising their identity and power. The public school system is based on an authoritative model with quantitative methods designed to measure rote knowledge, not critical thinking.

Studies and research in cognitive development find that multilingual individuals develop extensive pathways in the brain to handle the cross-referencing that occurs when a learner uses more than one language. Language reflects culture. It fosters the ancestral transference of knowledge through the enculturation of the social dialog. The cognitive processes of cultural differentiation can be seen in a study by James P. Lantolf, “On the Other Hand: Gesture/Speech Interface in L2 Performance” (to be published in 2004), where the L1 is reflected in the L2 “interface of gestures.” The study of the gestures in second language learners shows not only cultural differentiation in gestural expression but reflects the inner processes of language pathways in the brain by demonstrating the diverse expression between the acquired second language and their first language.

The Elders, in Mescalero, have often stated that children learning Apache (as a second language) are thinking in English while trying to speak in Apache. This cognitive style is reflective of assimilation. These same Elders say that when solving problems as a

native speaker, the solutions examined are reflective of the Apache language producing a “rich and elaborate solution”. One reason for the difference in pedagogy is the language structure of Apache which references verbs instead of nouns. Another is the rich descriptive pedagogy that places the speaker in the environment being described through descriptor referencing not only physical location but time, history and people. Although, demonstratives have not been fully documented at Mescalero, Edna MacLean’s dissertation shows an “analysis of demonstratives on two levels of use--the participation structure and the text structure. Demonstratives which involved the text structure signaled connections between Situations, "episodes", and Episodes” (MacLean, 1995). This language orientation and worldview comes from the Inupiaq narratives. The Inupiaq peoples landscape is constantly changing in the arctic weather and physical orientation within that environment is critical for survival.

“Mediational tools not only abet the development of higher mental processes but are fundamentally a part of the processes themselves” (Smagorinsky, P. 1994). The resource of potential evolution of human higher mental processing is lost in a culture that is forced to re-learn the fundamentals of another culture’s language and values. One does not have to look far in Western tradition to find a similar pedagogy of language tolerance. In scientific discoveries, the criterion is not in speaking the same language but in the approach and development of solutions to a common theme. The dialog that ensues is then translated into each scientist’s L1 for continued discourse.

Evidence of the success of second language acquisition that is seen in the cognitive development of the L2 learner is enhanced through cultural-historic curriculum that includes their first language or, in the case of indigenous language learners, their heritage language.

Research in the fields of education, linguistics, anthropology and cognitive psychology is unequivocal on one point: students who enter school with a primary language other than the national or dominant language perform significantly better on academic tasks when they receive consistent and cumulative academic support in the native/heritage language. (McCarty 2003)

In a recent study conducted at Dartmouth College by Dr. Laura-Ann Petitto found “that bilingual children can perform certain cognitive tasks more accurately than monolinguals . . . Being bilingual can give you a cognitive edge” (Red Nova 2003). This study and others are contrary to public opinion and educational and government policies that are in effect today. Research in second language acquisition supports methods of instruction and evaluation which utilize a second language learner’s first language. It also incorporates the second language gradually so the cognitive scaffolding of the students’ previous experiences is maximized.

The language and symbol representations of higher thinking presented in figures 1 and 2, of the cultural-historic knowledge are examples of the threshold upon which the

cognitive development of an individual or a child in society is launched. Scaffolding from the existing knowledge base of the learner/child is necessary for uninterrupted progressive movement of cultural-historic cognitive development which is intrinsically linked with language acquisition.

The historical development of behavior within a culture is reflection of the structure of that culture's language and cognitive tools which promote the identity of the individual within that culture. The human mind mediates understanding and knowledge through the cultural symbols and artifacts that are in the process of constant change but are innately linked to the historical society into which that individual is born. Vygotsky calls this "turn(ing) back to its source" which requires a "dynamic analysis". (Vygotsky, L. S. ,1978: 64) This act of looking back into one's ancestry and heritage is crucial in developing and maintaining identity. Jon Reyhner states, "These values are psychological imperatives that help generate and maintain an individual's level of comfort and self-assurance and, consequently, success in life" (1995).

Cultural-Historical-Activity Theory (CHAT).

Issues of culture, language, cognition, community and socialization are central to learning: primary socialization of infants and young children (as well as all later socialization into new communities of practice) is accomplished through joint, meaningful activity with guidance by more accomplished participants, principally through language exchanges or other semiotic processes. Language vocabularies and routines acquired by

learners through these processes are the elements that account for community, linguistic, and cultural continuity, and are the primary cognitive tools for individual and group problem solving and adaptations (e.g., culturally-based secondary socialization processes like schooling can be facilitated by activating the learners' cognitive and linguistic tools laid down by community socialization). Primary to this hypothesis is that activity (primarily joint activity) is the setting in which language and cognition are developed, and that patterns of activity have a cultural basis. (Grissmer, 2004)

Vygotskian Models and Indigenous Design

The historical development of behavior within a culture is a reflection of the symbols expressed in that culture's domain of historical experience.

The Indigenous models of language centered learning can be seen in the Navajo curriculum, Apache cosmology, Māori knowledge, and the Keres Study. In the article *Classroom Inquiry and Navajo Learning Styles: A Call for Reassessment*, McCarty *et al* compares and contrasts Western pedagogical principles with the Navajo's "spiraling body of integrated concepts, ideas, and information which support and reinforce each other, continuously expanding to higher levels of complexity and abstractness" (Begay and Begay 1982; Beishe n.d.) which is not the linear hierarchy of Western pedagogy, "nor a

set of skills from which learners and teachers may at anytime pick and choose”

(McCarty, Lynch, Wallace, Benally1991: 51).

The spiral is a symbolic representation of a cognitive developmental process reflected in Vygotsky’s own writing, “Development, as often happens, proceeds here not in a circle but in a spiral, passing through the same point at each new revolution while advancing to a higher level” (Vygotsky, L. S.,1978: 56). The spiral can be seen as time and the points are at different levels but the same theme or domain of knowledge which is revisited with the accumulated experiences of the individual within society.

Western tradition is linear hierarchical pedagogy and most Indigenous traditions are spiral or circular design with no hierarchy, this contrast in pedagogies can create different views of the same object. An example is when three particle theorists independently realize that the dual theories developed in 1968 to describe the particle spectrum also describe the quantum mechanics of oscillating strings.² The scientists were looking at the same reference point but at different times and with each passing evolution their accumulated experiences expanded their knowledge of the object, in this case a particle and a string.

Another example of Navajo curriculum is where the spiraling of knowledge can be seen in the ancient discipline of basket making. This spiral knowledge base incorporates the acquisition of knowledge across the dynamic domains of human development: phylogenesis, ontogenesis, and social-historical theory. “The first people

² <http://www.superstringtheory.com/history/history4.html>

came up from the middle and walked around in a spiral. This shape is found in our fingerprints. It shows we came from the middle of the world,” Sally Holiday Black, matriarch of the Navajo basket makers. The coiled basketry tray, ts’aa’, is consequently a phylogenesis for the fundamental origin and cultural-historic narrative about the Navajo’s emergence into this world from the worlds below (McGreevy 1999). Worlds below should not be confused with the Christian orientation of heaven and hell.

...into the conundrums of Tanzanita Pesata’s basket and into the mythic, ceremonial and spiritual foundations of Jicarilla Apache baskets follow. After briefly positioning the baskets in terms of their main historical and aesthetic characteristics and economic and historic development, this article will place basketry within the framework of the Jicarilla Apache religion. (Harold 1999)

Indigenous cultures were not filled with the paper literature of orthographic representation. The literature was incorporated into everyday and ceremonial items. The environment became the encyclopedia from which the social-cultural history was read. A simple item such as a basket holds numerous volumes of history and knowledge if one can read it. “Religion always has played a key role in Jicarilla society; everything is in some way related to or explained by religious beliefs, based on emergence stories,” say Veronica Tiller, Jicarilla Apache historian (Harold 1999).

The codes in baskets of symbols and design are not evident to the novice. These codes could be the discipline involved in the basket's construction, the ecology involved in the collection of the materials, the religious observations of prayer, the phylogenesis and ontogenesis that are symbolically linked and embedded in the spiral design of the basket. "A curriculum as it develops should revisit these basic ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them" (Bruner, 1960). There are funds of knowledge that are lost when a culture is not valued in the political struggle of domination.

Western tradition calls their interpretation and translation of indigenous cultures stories, myths or legends. The terminologies suggest that indigenous literature is untrue and not real. Theory is not a fact, but it is taught as truth. Every theory that supports the political voice in power is observed as fact. This rhetoric allows the dominant society to validate their postulation of white privilege because the words assimilate and disclaim any notion that other cultures have knowledge and intellect. When anthropologists talk about indigenous societies they use the rhetoric of oppression before they lay their claims in discovering the validity of indigenous designs and science.

N7aguchil11da? - when the world was being made
The world was created in 4 days

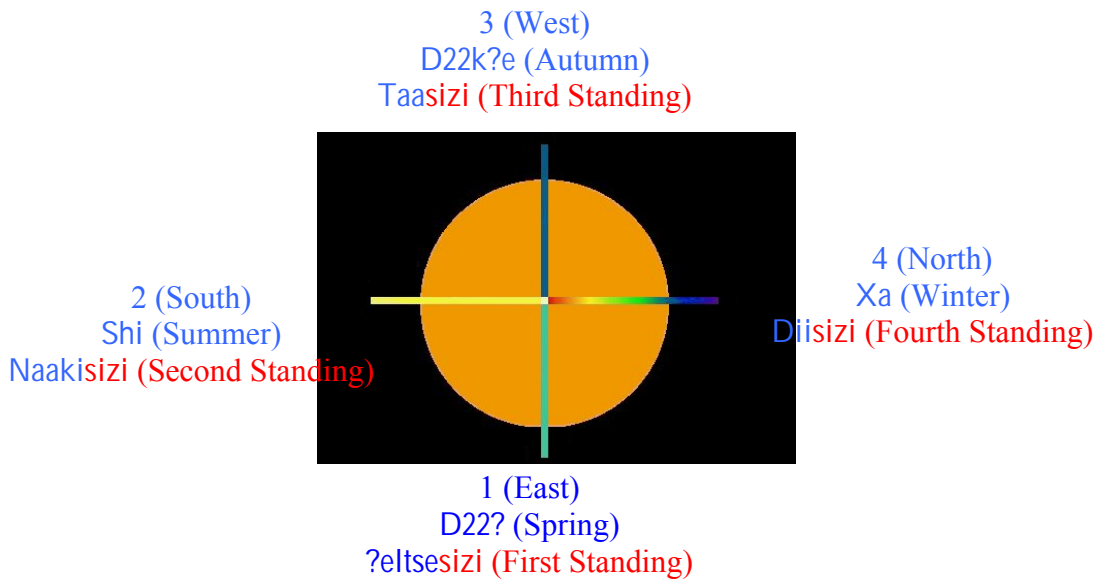


Figure 4 Symbolic representation of a base metaphor incorporating ontogenesis of Apache culture (Farrer 1991).

Figure 3 is another example of the complex weaving of the ontogenesis from the Mescalero Apache Tribe. Symbolic representation of a base metaphor holds volumes of social-cultural history for the elder who knows the language and was sanctioned in the use of knowledge. Knowledge which has to be handed down from a master/elder, is considered personal power in Apache society. This idea of acquired knowledge is reflected in our formal education as a graduation from different levels of competence such as high school, college and professional development. This same western structure devalues indigenous knowledge by rewriting our history.

Captain Cook arrived in New Zealand in the eighteenth century to “discover” the sophisticated and thriving Māori people. Their society was highly structured with a

unique world view and strong oral tradition. Māori society valued knowledge to the extent that it was entrusted to only a few and there were sanctions that ensured it was protected, used appropriately and transmitted with accuracy (Smith 2001). New Zealand had a name before the French purchased it for 150 French francs and 2 cloaks, 6 pairs of trousers, 12 hats, 2 pairs of shoes, some pistols, axes and 2 shirts: Aotearoa.

History is rewritten to begin after the colonizer has established their culture and language. The fabric of the communities who wove their history into the landscapes, place and personal names, carvings, weavings and genealogy were reclassified as oral traditions. Within Linda Tuhiwai Smith's lifetime, the Māori people were declared an extinct culture and New Zealand had raised a monument to their vanished nation. This action prompted the Māori to organize and revitalize their culture through language nests. Now the "vanishing" Māori people are prominent and strong after they contested the education they were receiving from the government through non-violent protests and self initiatives directed by the women.

In 1981 the first "kohanga reo" (language nest) pre-school Māori language immersion programme was established, led by Māori women. The aim was to make every Māori child bilingual by the age of 5 years old. In 1987 the Māori Language Act declared Māori as an official language of New Zealand. The Māori Language Commission was also established, having for responsibility to promote Māori as a living language. (New Zealand in History 2003)

Western thinking sees the human brain as the key organ in the body which houses the mind or intellect. The Maori do not see knowledge or intellect as being contained within the body but co-existing outside the body. The head was considered tapu for other reasons. In the Vygotskian model, cognitive development is social and not individualistically contained within a single organ. Smith goes on to say, what makes ideas 'real' is the system of knowledge, the formations of culture, and the relations of power in which these concepts are located (p 48).

Indigenous models of knowledge differ from the dominating social class structure. As has been model in previous examples, Mary E. Romero talks about the Keresan Pueblo perspective:

“the life principle creates a society in which relationships and cooperation rather than individualism and competition are emphasized and valued; where community contribution and helping others rather than self-promotion and self-interest are encourage; and, where all individuals are equally valued rather than differentiated and separated” (p 41).

The process of language in cognitive development shows how worlds can be created within the context of the symbols created by that society. The Western mind has fought to hold on to the values of individualism, selection and dominance, unwilling to accept alternate views of the world. Scientific greed is taking the risk of destroying ancient

knowledge systems through appropriation. The Western world has had to rediscover and unearth our knowledge bases to claim ownership and power over people. The United States educational policies have produced prisoners of war, not intellectuals.

Conclusion

Revisiting major pedagogical differences between Western Tradition or mainstream society as Romero labels in her Table of contrasting elements, one can distinguish how “Vygotsky turns Western tradition on its head”.

Major Contrasting Elements of Giftedness	
Mainstream/Conventional Concepts	Native/Keresan Concept
✦ Academic/mainstream needs and values	✦ Native/Keresan needs and values
✦ Exclusive nature	✦ Inclusive nature
✦ Individual focus	✦ Community focus
✦ Distinction	✦ Interrelationships
✦ Self-promotion	✦ Community contributions
✦ competition	✦ cooperation

Table 1 (Romero 1994)

Peggy McIntosh in a discussion of white privilege asserts that “[t]o redesign social systems we need to first acknowledge their colossal unseen dimensions. The silences and

denials are the key political tool here” (Gilmore, Smith and Kairaiuak 1997). As long as we continue to silence the children by imposing values, language and history that is not reflective of their community, we are promoting an educational system that will continue to produce dropouts and prisoners.

The quest for a mono-linguistic culture and a pan-American Indian as a solution to the assimilation of the American Indian undermines the unique and sophisticated diversity of Tribes in the United States. The diversity of the original nations, the American Indians, was mined by the Endo-Europeans for the most visible resources, land and food. Now as we struggle to revitalize our language, we must justify scientific reasons for supporting our methods of instruction, curriculum, language revitalization and historical references. Vygotsky is scientific in his analysis of cognitive development which support language centered learning. Language centered learning is crucial in the cognitive development of the child/learner. Indigenous cultures, nations, and tribes have struggled to keep their traditions and people alive. The greatest threat has been language dominance and assimilation into the dominant culture. As sovereign nations, we need to balance the two cultures of existence but that does not mean we have to choose one over the other. I believe that through tolerance and community awareness, our national and tribal nation, will gain strength through cooperative relations in solving problems seen and unseen. Vygotsky theories parallel teachings contain experienced, witnessed, and researched in Indigenous Nations and cultures. He provides a theoretical framework from which we can employ in expanding our sophisticated and complex culture into the present state of educational policies that enrich all our lives.

Without Native researchers who have insight into the social-cultural history, our voice and our ancestor's struggles to maintain the future generations and our language will disappear. Our extinction becomes the American dream of one language, one history, and one voice with only capitalism as the global culture. As long as there are culturally sensitive researchers who believe in education as a humanitarian effort and not power or dominance, the diversity of our cultures and languages will be strength as multicolored cloth which will not be unwoven.

In my research of second language acquisition as it is related to Vygotsky's Cultural Social Historic theory the Indigenous traditional learning methods and funds of knowledge are crucial educational models that need to be adopted. A metamorphosis in our educational system is needed if we are really concerned with cognitive development of the children and are interested in promoting a society that is tolerant of different cultures. Reasons we should embrace diversity are not only moralistic but evident of the expanded knowledge base that we can have as a nation. After all if the World War II code talkers had spoken only English, we would all be speaking Japanese. Our indigenous stories and ways of learning/living need to be told and woven into the fabric of a formal education to keep our great nation strong.

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