Native-American & Euro-American Cultures

A Comparative Look at the Intersection between Language & Worldview

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The Earth is in trouble. Decades of mining, over-fishing, and the pumping of toxic chemicals into the atmosphere have taken an enormous toll on an otherwise robust and healthy planetary ecosystem. Those responsible have prioritized financial gain over sustainability, over life—plant, animal, and human. Short-term profit realization has resulted in a blatant disregard for long-term environmental effects, and has been supported by governments and corporations, demonstrating a widespread disrespect for the earth that supports their activities. One must ask, then, how so many people can allow, and even endorse, such ecologically destructive practices. Perhaps it has to do with the growing gap between first -and third-world countries, between humans and nature, and the ever-increasing penchant for consumerism. Perhaps it has to do with a lack of basic respect for life. Perhaps there is something wrong with the way we think.

There are, in fact, differences in the ways different cultures think. A mindset, or worldview, is a culture's standard way of perceiving reality, of processing information, of approaching problems, and of interacting with others. Cultures with individualistic tendencies generally have analytic, decontextualizing cognitive orientations, while those with collectivistic tendencies have holistic, contextualizing cognitive orientations (Ji, Nisbett, & Peng, 2000). A group's worldview reflects their culture's values, and is the mechanism used in turn to shape the values of successive generations, largely with language as the conduit (Gay, 2010; Goddard, 2003; Oyserman, 2011).

Many values are conveyed unconsciously, in the form of colloquialisms, catch phrases, and cultural metaphors (Bowers, 2004; Martusewicz, Edmundson, & Lupinacci, 2011). This article begins with a comparison of the worldviews of Native Americans and those of Euro-Americans as related to the natural world, followed by a discussion of the many ways in which language perpetuates a culture's mindset. Identifying four core Native-American values that are particularly relevant to the ecological crisis, the discussion turns to Native holistic thinking and Euro-

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American systems thinking in order to examine ways in which English might be deliberately used to encourage students to adopt a more eco-friendly, holistic cognitive orientation toward human-environmental relationships.

Worldviews

In the last fifty years or so, there has been a surge of research on the cognitive aspects of entire cultures, which scholars have referred to as a group's worldview, mindset, cognitive orientation, or paradigm (Bowers, 2002; Cajete, 2000; Ji, et al., 2000; Lee, Oyserman, & Bond, 2010; Nisbett, Peng, Choi, & Norenzayan, 2002; Oyserman, 2011). For the purposes of this work, the terms will be used interchangeably, with the understanding that a worldview is a culture's standard way of perceiving reality, processing information, approaching problems, and interacting with others. It reflects a culture's values, and is the mechanism used in turn to shape the values of successive generations.

Many, if not all, of the world's cultures fall into one of two camps: collectivistic or individualistic cultures (Ji, et al., 2000; Nisbett, et al., 2002; Oyserman, 2011). Collectivistic societies are so named because they place greater value on the welfare of the group than on the individual. Fitting in, collaboration, and the fulfillment of expected roles are emphasized, and individuals come to view themselves as part of a larger construct, interdependent, rather than independent (Cajete, 1999; Nisbett, et al., 2001). Individualistic societies, such as those in Western Europe and in English-speaking nations around the world, prioritize the individual over the group, emphasizing independence, competition, and individual achievement.

Cognitively, individualistic cultures have an affinity for logical analysis and for decontextualizing information, as well as for categorizing and subcategorizing subjects and topics (Bednar, 2003; Cajete, 2000; Martusewicz, et al., 2011; Nisbett, et al., 2001; Orr, 2004; Oyserman, 2011). In contrast, collectivistic societies tend to contextualize information, seeking connections and patterns between subjects and topics, and to prioritize the context in which events occur (Ji, et al., 2000; Martusewicz, et al., 2011; Macias, 1989; More, 1989; Nisbett, et al., 2001; Oyserman, 2011; Pewewardy, 2002).

Individualistic societies are exemplified by the culture of Euro-Americans, who will also be referred to as White in this article, with no disrespect intended. Illustrating collectivism particularly well are the many cultures of Native Americans who will be referred to as Natives, Indians, and American Indians, again in the hope that the terms do not offend. The term "Native American" encompasses over 500 indigenous nations and over 175 distinct languages (Native Languages of the Americas, n.d; Nelson, 2008), in the same way that the term "Western European" represents a collection of distinct cultures and languages.

In the pages that follow, references to Native Americans apply to people who have been raised within their cultures, with exposure to their tribal languages, with the acknowledgement that many tribal languages have been lost and others are on the brink of extinction. Observations about entire cultures are also meant to be representative, recognizing that within a society there is much variation and readers are cautioned against stereotyping individuals and or groups. The research cited here has focused on patterns of behavior and refers to general trends in a population.

In American classrooms, where the vast majority of teachers are White (Castagno & Brayboy, 2009; Renzulli, Parrott, & Beattie, 2011), there are infinite possibilities for misinterpretation and misunderstandings with Native-American students (Castagno & Brayboy, 2009; Gay, 2010; Pewewardy, 2002). The Native preference for fitting in and working together (Cajete, 2000; Pewewardy, 2002; Swisher & Deyhle, 1989) is particularly relevant because Indian students sometimes confound their Euro-American teachers when they hesitate to answer questions in class. Drawing attention to themselves in this way would be considered boastful by their peers (More, 1989; Pewewardy, 2002; Swisher & Dehyle, 1989).

In this example, however, there is another issue—in the holistic mindset there is often more than one correct answer, even to seemingly obvious questions (Cajete, 2000; Kidwell, Noley, & Tinker, 2001; Wenzel, 2010). As a lighthearted, but illustrative example, 7 + 5 = 12 most of the time, but there are situations where the thing being counted breaks off (such as a twig), and then you have 13. Or perhaps two join together, the way bubbles do, and then you only have 11. There are times, then, when 7 + 5 does not equal 12. Context is everything. To a child raised to reflect before answering questions, problems should be examined from more than one angle and other possibilities should be seriously considered (Chavez, Ke, & Herrera, 2012; Macias, 1989; More, 1989; Pewewardy, 2002).

With collectivistic cultures' emphasis on collaboration over competition, Native-American students also display a preference for group work. Group projects tend to elicit more participation than individual work and team sports can spark fierce competition (Swisher & Deyhle, 1989). Collaboration, which also enables students to avoid the limelight, makes group activities significantly more appealing to Native students (Brayboy, 2006; Cajete, 1999; Pewewardy, 2002; Pewewardy & Hammer, 2003). While there are many White students who also prefer group work, Euro-American schools, reflecting the values of White individualism, have traditionally emphasized independent work and competition (Pewewardy, 2002).

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Cognitively, Native Americans also demonstrate the collectivistic tendency to think holistically. That is, they look for patterns and for connections between events and between pieces of knowledge or information (Brayboy, 2006; Ji, et al., 2000; Macias, 1989; More, 1989; Nisbett, et al., 2001; Oyserman, 2011; Pewewardy, 2002). Where the Euro-American mind will decontextualize information for analysis, the Native mind contextualizes for synthesis, with the view that nothing exists in a vacuum, and that there is more to every situation than the event itself.

Work by Morris and Peng (1994) provides an example of this, and also the dichotomy of agency; individualistic Euro-Americans view agency as residing within the individual, whereas collectivistic Indians look to the situation and greater context first. Morris and Peng explain that in discussing events such as mass murders, people in individualistic cultures look to

the state of mind of the perpetrator. Those in collectivistic societies first consider the context, seeking circumstances or events that might have caused the perpetrator to behave in such a way (Morris & Peng, as cited in Nisbett, et al., 2001).

The final dichotomy to be mentioned here is the Euro-American preference for logical analysis in education as opposed to the Native-American value of experiential learning (Deloria, 2003; Macias, 1989; Margolin, 2005; Swisher & Dayle, 1989; Tafoya, 1989), expressed in the saying, "When you teach someone something, you have robbed him of the opportunity to learn it" (Margolin, 2005, p. 70). Both groups are capable of logical thought, of course, and people in both cultures can, and do, learn from personal experience. The difference is that "when logical structure conflicts with everyday belief, [analytic] Euro-American students are more willing to set aside empirical belief in favor of logic" (Nisbett, et al., 2001, p. 301). Native Americans are more likely to accept what they have learned through personal experience than what "makes sense" logically.

An interesting, but important, side effect of experiential learning is the recognition that no two people will have the same experience; therefore knowledge acquired by two children in the same situation will be different. This is in direct contrast with the traditional Euro-American view that knowledge is information, external to the individual, and that a group of children can and should all acquire the same knowledge in the same way (Eisner, as cited in Slattery, 2013). In the holistic paradigm, that which each child learns will be "true" to him, and seemingly contradictory facts may both be true at the same time. For example, two children in a pen of puppies may have two very different experiences, and the one who says that puppies are sweet and cuddly is as correct as the child who says puppies jump and scratch. What is important to note is that this mindset allows for ambiguity and seemingly contradictory "truths," thereby enabling holistic thinkers to consider other perspectives as equally valid (Cajete, 2000; Kidwell, et al., 2001; Nelson, 2008; Wenzel, 2010).

Euro-Americans, in contrast, look for "right" answers, the "right" way to do things, and for absolute truths (Cajete, 2000; Deloria, 2003; Kidwell, et al., 2001). In traditional Euro-American educational settings, answers are right or wrong, and only the more open-minded instructors will consider other possibilities. This emphasis on fact and absolute truth is behind the scientific approach to objects and information that breaks things down into their assorted parts for decontextualized study (Bednar, 2003; Orr, 2004; Slattery, 2013). Such work involves a great deal of categorization (and sub-categorization), and it is not without value. Libraries and office filing systems function well only because of this sort of detailed categorization.

Decontextualized study may have been taken to an extreme in American educational settings, however, where subjects are taught as independent disciplines, with little or no effort to connect learning or put it into a larger context (Ableman, 2005; Bednar, 2003; Cajete, 2000; Capra, 2005; Castagno & Brayboy, 2009; Orr, 2004; Slattery, 2013). Euro-Americans, both scholars and hobbyists, have also employed their categorization skills as they studied the natural world, examining parts of it in isolation, in disciplines such as botany, entomology, and geology. People with this cognitive orientation have been labeled "field independent" because they view an object or event apart from its context, or "field," and can, in fact, find it difficult to consider the context (Ji, et al., 2000; Nisbett, et al., 2001; Oyserman, 2011; Pewewardy, 2002). Native Americans have a "field dependent" or "field sensitive" (More, 1989) cognitive orientation (More, 1989; Pewewardy, 2002; Swisher & Deyhle, 1989), meaning that they focus on the context or environment (the field) in which an object or event is found (Ji, et al, 2000; Nisbett, et al, 2001; Oyserman, 2011), and may find it difficult to consider information out of context (Pewewardy, 2002). The term "field sensitive" is felt to be more appropriate, partly because the term "dependence" suggests weakness, rather than orientation. The term "field independence" suggests a clear division when in fact the two cognitive styles represent the ends of a continuum (Pewewardy, 2002). In keeping with the greater body of research, however, the terms "dependent" and "independent" will be used here.

As mentioned earlier, a worldview is a culture's standard way of perceiving reality (field dependence/independence, absolute truth/different perspectives, logical analysis/experiential learning), processing information (analysis/synthesis), approaching problems (categorization/contextualization, agency), and interacting with others (competition/collaboration, standing out/fitting in). Unless taken to an extreme, neither is better than the other, but people in both groups are largely unaware that there are other "ways of knowing" (Brayboy, 2006).

Language as a Conduit of Cultural Values and Beliefs

Scholars across disciplines agree that language is an important vehicle through which cultural values are passed on to succeeding generations (Bowers, 2002; Bruner, 1996; Cajete, 2000; Gay, 2010; Goddard, 2003; Martusewicz, et al., 2011). Martusewicz and her colleagues (2011), explain, ". . . the language system that any culture uses is what any member is born into and socialized through" (p. 59).

The basic syntax of a language has been found to affect one's cognitive orientation. Native-American languages are described as "verb-based" (Cajete, 2000, p. 27), and it is thought that this reflects a cultural focus on action; on connections between a beginning and an end (Cajete, 2000; Gopnik & Choi, 1990). Young English-speaking children learn nouns before verbs and develop labeling and categorization skills earlier (Gopnik & Choi, 1990; Tohidian & Tabatabaie, 2010) than do children in collectivistic cultures. "Thus, it appears that the prevalence of nouns and verbs in speech given to children as well as the way they are used . . . may influence the timing of certain cognitive achievements" (Tohidian & Tabatabaie, 2010, p. 60).

In addition to grammatical influences, the effects of which go unnoticed, languages are peppered with sayings and proverbs whose purpose is to explicitly transmit values such as cleanliness being next to Godliness, and the fact that you can catch more flies with honey than you can with vinegar. Less obvious are the nuances attached to commonly-used individual words. These nuances are so embedded in the culture that the unspoken aspect is understood by the members of a community without conscious thought. Martusewicz, et al. (2011) refer to them as cultural metaphors. The phrases "light" and "dark," for example, imply good and evil. There are the "dark arts," and the "dark" continent of Africa, with sinister connotations, standing in stark contrast to phrases such as "lighting the way" and "beacon of hope" with positive, almost spiritual connotations. Similarly, the word "independent," as mentioned earlier, evokes a particularly strong response in the United States where personal freedom is so highly prized as a cultural norm.

Many metaphors are benign, but some perpetuate attitudes that can lead to harmful practices, such as "resources," referring to plants and animals as commodities, and "progress," which suggests that outdated

models or methods be abandoned for the new—because they are new, and therefore better. Some familiar phrases, dripping with nuance, are "'the American dream," "free market," "individual freedom," and "economic growth'" (Bednar, 2003, p. 4). In the U.S., these phrases have been used to support the dominance of business, the feverish rise of industry as progress, and the competitive spirit of individualism to the detriment of the natural world (Bednar, 2003; Bowers, 2002; Martusewicz, et al., 2011; Orr, 2004).

Cultural metaphors are powerful because the meanings attached to them generally go unnoticed, and are thus accepted as "just the way the world is" (Martusewicz, et al., 2011, p. 63). Equally as powerful, however, are a culture's silences (Bowers, 2002; Swartz, 2009). A metaphor can be dissected, but a silence cannot because as silence, there is nothing to examine.

> This means that the implicit, taken-for-granted, silent, invisible [narratives] receive no recognition. They operate 'in the background,' so to speak. Jerome Bruner refers to these narratives as 'canonical,' (Swartz, 2009, p. 794)

As an example of canonical silence in the United States, consider the historic omission of Native Americans in children's textbooks (Pewewardy, 2002). There has been some improvement toward these inclusions since the end of the last century (Gay, 2010), but generations of children learned about their country's history through the eyes of White men (Gay, 2010; Pewewardy, 2001).

Another silence in mainstream White culture is that of spirituality (Cajete, 2000; Orr, 2004). Spiritual and religious knowledge are thought of more as "belief" than "knowledge" and to a society that values logical analysis, only objective knowledge is considered reliable (Martusewicz, et al., 2011). Because subjective knowledge, such as spirituality, is not acknowledged, let alone discussed except among close friends, it is dismissed as unimportant when it does arise (Cajete, 2000; Orr, 2004).

In Native-American cultures, however, knowledge is expected to be subjective because any learning of value is acquired through experience (Deloria, 2003; Macias, 1989; Margolin, 2005; More, 1989; Swisher & Dayle, 1989; Tafoya, 1989), which is subjective by definition. Spirituality is also not separate from other aspects of life. It is, in fact, an integral part of the Native-American lifestyle, not a religion. One is in constant contact with the spirit world through interaction with people and the natural world (Adamson, 2008; Cajete, 2000; Deloria, 2003; Kidwell, et al., 2001; Lyons, 2008; More, 1989; Pewewardy, 2002).

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This interplay between experiential learning, connection to the spirit world through interaction with others, and a field-dependent cognitive orientation highlights the interconnected, subjective mindset of Native-American cultures. It stands in contrast to the Euro-American tendency to separate the spiritual and emotional from learning, to place more value on objective knowledge, and to decontextualize information (Bednar, 2003; Bowers, 2002; Cajete, 2000; More, 1989; Orr, 2004; Oyserman, 2011; Pewewardy, 2002; Slattery, 2013). The different mindsets are perpetuated through the use of colloquialisms, syntax, metaphors, and silences. Some of this language use is deliberate, some unconscious, but the messages are strong, and the effects far-reaching.

Systems Thinking

Unlike White Americans, Native Americans do not consider themselves as separate from, much less superior to the natural world (Armstrong, 2005; Cajete, 2000; Deloria, 2003; Kidwell, et al., 2001). "Each form of life has its own purposes" (Cajete, 2000, p. 87), and there is no assumption that the human is in some way superior to the "others" (Cheyfitz, 2009; Mohawk, 2008). Humans are simply "plain members and citizens of the biotic community" (Leopold, as cited in Orr, 2004, p. ix). Inanimate objects such as the stars, stones, and the land embody the Creator's spirit, which is why they are described with a form of animism, and they are respected equally with plants, humans, and animals (Cajete, 2000; Deloria, 2003; Kidwell, et al., 2001).

With this respect for other life forms, Native Americans have a long history of working with the land (Cajete, 2000; Kidwell, et al., 2001; Lightfoot & Parrish, 2009; Mohawk, 2008; Rawls, 1984). They do not manage it, for that would imply superiority and disrespect; they ask permission through ceremonies (some elaborate, others very simple) to take what they need, and they give something back in return. Reciprocity is central to the Native-American paradigm (Cajete, 2000; Deloria, 2003; Kidwell, et al., 2001), and upon receiving a gift, it would be unconscionably rude not to give something in return, even just a token.

California Indians, among others, are known to have deliberately pruned, cleared debris, transplanted, and used fire to promote plant growth (Anderson, 2005; Lightfoot & Parrish, 2009; Mohawk, 2008). Gregory Cajete refers to their work as a kind of "environmental bonsai," because it "actually formed the flora and fauna of the landscape" (Cajete, 2000, p. 111). One could argue that the work was entirely to their benefit, as was their habit of not over-harvesting (Armstrong, 2005; Cajete, 2000; Martusewicz, et al., 2011), but American Indian writers relate that the reasons their elders gave them for the care of the landscape had to do with balance and respect for other forms of life rather than simply for the purpose of increased productivity (Armstrong, 2005; Kidwell, et al., 2001; Martinez, 2008; Martusewicz, et al., 2011).

This emphasis on harmony and balance, maintained through reciprocity, is found in tribes across the country (and among indigenous groups around the world), and is a theme that runs through much of the published work on Native culture. It is also an example of two Native-American taken-for-granted "truths." The first is that all life is interconnected and interdependent (Cajete, 2000; Kidwell, et al., 2001; Mohawk, 2008; Slattery, 2013). The second is that relationships both within and beyond the tribe are important, and that some effort is required (Armstrong, 2005; Armstrong, 2008; Martinez, 2008; Settee, 2008) in order to maintain balance within them. Describing these concepts, Kidwell and her colleagues (2001) write:

> The value of reciprocity, which is a hallmark of Indian ceremonies, goes to the heart of issues of sustainability, which

> is maintaining a balance and tempering the effects of basic human survival techniques. There is no ceremony among any people for clear-cutting an entire forest. (p. 44)

The holistic Native-American worldview embodies the notion of sustainability in general, with a few key values that are particularly ecofriendly. The first value is respect for other life forms (Armstrong, 2005; Kidwell, et al., 2001; Martinez, 2008; Martusewicz, et al., 2011; Settee, 2008), beginning with the fundamental acknowledgement that they have a right to exist (Anishinaabeb Elder, as cited in Martusewicz, 2011). The second value is balance (Armstrong, 2005; Kidwell, et al., 2001; Martinez, 2008; Martusewicz, et al., 2011; Pewewardy, 2002; Settee, 2008), as an unbalanced system of any kind will not prosper. The third ecofriendly value, reciprocity, reflects Native respect for other life forms and helps to maintain balance (Cajete, 2000; Deloria, 2003; Kidwell, et al., 2001) in family systems, social systems, and biotic systems. The fourth value is holistic thinking. It is more than a cognitive orientation; it is an instinct to put information into a larger context, to consider the bigger picture, with its many intricate connections. Information that has no context is of little value; with no context, it has no use (Deloria, 2003; Macias, 1989; Margolin, 2005; More, 1989; Swisher & Deyhle, 1989; Tafoya, 1989). A holistic thinker recognizes that there are infinite ways in which humans and other life forms are interconnected. She prioritizes connections and patterns over categorization and is able to approach situations from multiple perspectives, appreciating the value of others' "truths," even when they appear to contradict her own (Cajete, 2000; Ji, et al., 2000; More, 1989; Nisbett, et al., 2001; Oyserman, 2011; Pewewardy, 2002; Swisher & Deyhle, 1989).

These four key values—respect for other life forms, balance, reciprocity, and holistic thinking—overlap, the way various life systems overlap—ecosystems, social systems, respiratory systems, political systems. This is not to imply that all American Indians spend their time talking to trees and planting acorns. Indeed, the author recently had lunch with a Wintu friend at a picnic table on mown grass—or rather the author had lunch, while her friend in designer boots slapped at gnats, exclaiming, "I hate the wilderness!" (M. Acuna, personal communication, July, 2012) The point is that the Native-American holistic mindset takes the natural world into account and considers the effects of action taken against it—except, perhaps, when it comes to gnats.

The individualistic mindset of Euro-Americans, on the other hand, has a poor track record when it comes to its relationship with the natural world. The four key values represented by the Native-American paradigm—respect for other life forms, balance, reciprocity, and holistic thinking—are noticeably lacking in Euro-American cultures.

> If today is a typical day on planet earth, humans will add fifteen million tons of carbon to the atmosphere, destroy 115 square miles of tropical rainforest, create seventy-two square miles of desert, eliminate between forty to one hundred species, erode seventy-one million tons of topsoil, add twenty-seven hundred tons of CFC's to the stratosphere, and increase the population by 263,000. Yesterday, today, and tomorrow. (Orr, 1992, p. 3)

The daily loss of plant and animal species (World Wildlife Federation, n.d.), overfishing, strip mining, and unethical business practices conducted overseas to avoid American safety laws all illustrate individualistic thinking gone amok (Martusewicz, et al., 2011). The question then arises as to how to encourage staunchly individualistic Euro-Americans to think in a more holistic manner, to value other forms of life, and to seek a more reasonable and sustainable balance of the ecological systems of which we are a part.

In truth, the task may not be as difficult as one might imagine. As postmodernism crept into the 20th century, it brought along early ideas of the interconnected nature of the world (Slattery, 2013). Witness systems thinking. An outgrowth of system dynamics, systems thinking "focuses on how the thing being studied interacts with the other constituents of the system…of which it is a part" (Aronson, 1996, p. 1). It does, however, involve a paradigm shift for Euro-Americans accustomed to the structure of logic and analysis. They must learn to change the direction of their focus

> . . . [f]rom objects to relationships. An ecosystem is not just a collection of species, but is a community. Communities, whether ecosystems or human systems, are characterized by sets, or networks of relationships. In the systems view, the "objects" of study are networks of relationships, embedded in larger networks…The shift of focus from the parts to the whole implies a shift from analytical thinking to contextual thinking. The properties of the parts are not intrinsic, but can be understood only within the context of the whole. Since explaining things in terms of their contexts means explaining them in terms of their environments, all systems thinking is environmental thinking. (Capra, in Stone, et al., 2005, p. 20)

These notions—of balance and reciprocity, of overlapping and connected systems, of the need to examine the context of an object or event—demonstrate an enormous paradigmatic shift. In an effort to bring these "new" discourses into everyday Euro-American conversation, one must consider how language might be used in the classroom to convey ideas that are so effortlessly transmitted in Native languages.

Changing Language Use in the Classroom

According to Vygotsky's theory, language influences "the very nature and essence of the thinking process" (Bodrova & Leong, 2007, p. 30). This supports the claims made by Bowers (2002) and Martusewicz, et al., (2011) that language carries cultural metaphors that influence the way people think. Vygotsky's theory also aligns with Morris and Peng's findings that grammatical patterns play a role in cognition. It stands to reason, therefore, that a deliberate shift in the use of syntax, colloquialisms, and metaphor in the classroom could nudge students' cognition in a more holistic direction.

Consider a deliberate change in the use of syntax, for example. A shift in the use of a language's syntax does not require that its grammatical structure be altered. In the same way that children are taught to write in the first or third person, they can be taught to write in a manner that emphasizes the use of verbs, with explicit instruction regarding the way verbs highlight connections and cause-and-effect situations, both of which are important aspects of systems thinking (Aronson, 1996). This brings systems thinking out of narrative silence and into common conversation, thereby elevating it to a topic of value (Martusewicz, et al., 2011; Swartz, 2009). An emphasis on nouns, as mentioned earlier, would highlight labels and distinctions, creating a tendency to categorize and isolate information (Gopnik & Choi, 1990; Tohidian & Tabatabaie, 2010).

Metaphor change has already begun, starting with the wave of political correctness that began in the 1970s. The word "cripple," for example, has been replaced with "physically disabled." Adding the term "physically" to "disabled" subtly reminds people that the mental faculties

of the person in question are not part of the disability—an assumption made with surprising regularity (Karp, 1999).

Even business metaphors are changing, in spite of the Euro-American devotion to capitalism (Orr, 2004). Terms such as "ethical business practices" and "sustainable sourcing" have entered mainstream conversation, with the result that unethical business practices and non-sustainable sourcing are no longer silent narratives. Popular use of the new terms makes it easier to discuss the issues, both at the social level and at the business level; they do not have to be defined, and because they are no longer silenced, they are understood to be issues of value.

Even cognitive orientation has been addressed in recent years. Research has shown that "individualistic and collectivistic mindsets are available cross-culturally…[and] both can be 'primed'" (Oyserman, 2011, abstract). No matter the cultural mindset, "differences arise in part from momentary cues that make either individualistic or collectivistic mindset available" (p. 164). Oyserman's work involved the use of innocuous, yet culturally weighted, verbal cues—either written or spoken—to prime subjects just before filling out a questionnaire or completing a brief activity. The result was that the students involved approached the activity with the primed outlook—either holistic or analytic—and that mindset remained in place while they completed a series of tasks. This suggests that students can be primed to adjust their focus, at least for short periods of time (Oyserman, 2011), such as a class period. Since people call on either the analytic or holistic approach as appropriate to the situation, it is reasonable to assume that emphasizing one mindset during school hours will not hinder a student's ability to use the other in out-of-school situations.

Conclusion

Holistic thinking, in and of itself, of course, is not the ultimate goal. It is, however, the cornerstone of systems thinking. It is more than the ability to conceptualize the myriad ways that life interconnects; it is the inclination to seek connections first rather than to classify automatically. Making these connections is the key to understanding that all life is interdependent. With a deep understanding of this interdependence, the need for balance becomes a priority.

It is clear that a great many values and beliefs are conveyed through a society's language. This suggests that if language were to be used in a deliberate way, it could influence a student's cognitive orientation. This could be accomplished through clearly-stated exchanges, and pedagogies that express the inherent values associated with biodiversity and respect for interdependence of life forms. Such conversations would also serve to bring ecological concerns into everyday cultural norms, removing the silences that render them unimportant. A student's cognitive orientation may also be influenced by verbal priming (Oyserman, 2011) and a deliberate use of syntax to encourage a holistic frame of thought in classroom-based inquiry.

For educators, the deliberate use of language to influence cognition presents many possibilities. There are, for example, schools that feature an ecological orientation to the curriculum (Barlow & Stone, 2005), many of them using systems thinking as a foundational framework (Stone, 2005). How are deliberate shifts in the use of English language affecting the ways in which children learn in those schools? How would they affect the way children learn in mainstream schools? In what ways would the implementation of those shifts affect teachers' thinking and behavior beyond the school walls? What would the ramifications be, and where would we see them? Instructional practice? Curriculum development? Business practices? Court decisions? We can predict some outcomes, but others, in our intricately interconnected world, may simply surprise us.

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