PERCEPTUAL DIVERSITY:

Is Polyphasic Consciousness Necessary for Global Survival?

by

Tara Waters Lumpkin

Published in Anthropology of Consciousness, Volume 12, Number 1,
March/June 2001
Table of Contents

Introduction to Perceptual Diversity ................................................................. 1
Cognitive Neuroscience, Embodied Knowledge, and Beyond .................................. 3
Rites of Passage ................................................................................................. 6
Ritual and Healing ............................................................................................... 6
Relationship between Perceptual, Cultural, and Biological Diversity ....................... 9
Social and Cultural Adaptability ........................................................................ 12
Epistemology of Science .................................................................................... 12
Neurognosis ....................................................................................................... 15
International Development .................................................................................. 15
Namibia—A Case Study ..................................................................................... 17
    Survey Background ......................................................................................... 17
    Personalistic and Naturalistic Etiologies .......................................................... 19
    Illness and Disease ......................................................................................... 20
"African" Illnesses .............................................................................................. 20
Illness in An Ecological Context .......................................................................... 22
Missionary Influence on Traditional Medicine ..................................................... 23
Communication Between Traditional Healers and Biomedically-Oriented Professionals ........................................................................................................... 23
    An Innovative Recommendation ...................................................................... 25
The Therapist-Spiritist Project in Puerto Rico ...................................................... 27
Conclusion: Global Survival and Perceptual Diversity ......................................... 29
References Cited ................................................................................................. 31
Abstract

Perceptual diversity allows human beings to access knowledge through a variety of perceptual processes, rather than merely through everyday, waking reality. Many of these perceptual processes are transrational, altered state of consciousness (meditation, trance, dreams, imagination) and are not considered valid processes for accessing knowledge by science (which is based primarily upon quantification, reductionism, and the experimental method). According to Erika Bourguignon’s research in the 1970s, approximately 90% of cultures have institutionalized forms of altered states of consciousness, meaning that such types of consciousness are to be found in most human societies and are “normal” (1973:9-11). Now, however, transrational consciousness is being devalued in many societies as it is simultaneously being replaced by the monophasic consciousness of “developed” nations. Not only are we are losing (1) biodiversity (biocomplexity) in environments and (2) cultural diversity in societies, we also are losing (3) perceptual diversity in human cognitive processes. All three losses of diversity (bio, cultural, and cognitive) are inter-related.

Cultures that value perceptual diversity are more adaptable than cultures that do not. Perceptually diverse cultures are better able to understand whole systems (because they use a variety of perceptual processes to understand systems) than are cultures that rely only on the scientific method, which dissects systems. They also are better stewards of their environments, because they grasp the value of the whole of biodiversity (biocomplexity) through transrational as well as scientific processes. Understanding through perceptual diversity leads to a higher degree of adaptability and evolutionary competence.

From the perspective of an anthropologist who has worked with development organizations, development will continue to destroy perceptual diversity because it exports the dominant cognitive process of “developed” nations, i.e. monophasic consciousness. Destroying perceptual diversity, in turn, leads to the destruction of cultural diversity and biocomplexity. Drawing from research I conducted among traditional healers in Namibia, I conclude that development organizations need to listen to those who use transrational perceptual processes and also need to find a way to incorporate and validate perceptual diversity in their theoretical and applied frameworks. Key words: perceptual diversity, systems theory, perception, cultural diversity, biodiversity, biocomplexity, Namibia, traditional medicine, ethnomedicine, development.
Introduction to Perceptual Diversity

To perceive is to become aware. Human perception is created by the interaction of human biology, the physical environment, an individual’s personal development, and a person’s culture (Lazlo and Krippner 1998:65). Perception is a complex, synergistic system, with numerous feedback loops, allowing for the generation of meaning and subsequent communication of that meaning. Perception evolves and changes as an individual, culture, or environment changes.

Individuals’ “cognitive maps” map the topography of the relationship between the individual, his or her culture, and his or her physical environment. Furthermore, individual cognitive maps are affected both by personal experience and by the values and beliefs that are dominant within a society. Cultures also have collective cognitive maps (Lazlo and Krippner 1998:65-67). According to Lazlo and Krippner, “The concept of the cognitive map is becoming part of the accepted terminology used to describe human-environment interactions in evolutionary and adaptive studies (1998:66).

In this world there exist a variety of cognitive maps, which make up what I call "perceptual diversity." Anthropologists are well aware of the fact that there are many perceptual processes that lead to the creation of cognitive maps. Some cultures use more than one perceptual process regularly; for example, a culture might use dreaming, meditation, or trance as perceptual processes, as well as everyday, waking reality in its creation of a cultural map. This type of cultural map values perceptual diversity, the whole, and the synergistic interrelationship between parts. “Developed” cultures, however, acknowledge only one perceptual process, that of everyday, waking reality. This leads to a specialized cognitive map that values only one approach to meaning and dismisses all other perceptual processes.

A growing number of psychologists and anthropologists have become interested in the value of perceptual diversity, seeing the use of multiple perceptual processes as positive rather than pathological. Anthropologist Charles Laughlin has proposed that cultures are "monophasic" or "polyphasic" (1992). Polyphasic cultures value perceptual processes that use altered states of consciousness, such as dreaming, lucid dreaming, contemplation, ecstatic and trance states, as well as ordinary, waking consciousness (Walsh 1993:125). Roland Fischer presents a model of altered states of consciousness based on neurophysiology (1970a; 1970b). According to Fischer, states of consciousness are based along a continuum of arousal of the central nervous system. States of reduced central nervous system arousal (or hypoarousal) are represented by tranquil meditation or the Yogic state of samadhi. States of increased arousal (or hyperarousal) are represented by sensitivity, creativity, anxiety, ecstasy, and mystical rapture. Arnold Ludwig presents a different model for altered states of consciousness, organizing such states into five different categories of induction: (1) reduction of external stimulation and/or motor activity, (2) increase of external stimulation and/or motor activity and/or emotion, (3) increased alertness or mental awareness, (4) decreased alertness or mental awareness, and (5) the presence of somatopsychological factors (1968:75). Whichever model is used, altered states of consciousness are recognized by individuals and by cultures as being somehow different from everyday, waking, rational reality. Cultures that value altered states of consciousness (polyphasic consciousness) can be found throughout the world. However, according to Bourguignon, “The nineteenth-century view of progress, not only from simple to complex but from a primitive mentality to a civilized one, is associated with an evaluation of the ecstatic as savage and childlike” (1973:342-
3). She also points out that the Protestant Ethic cultural form does not value ecstatic experience or any other forms of altered states of consciousness (1973:342).

The Kalahari Kung in Botswana are an example of a polyphasic culture. Anthropologist and clinical psychologist Richard Katz lived with them in the 1970s and documented that one-third of all adult Kung “routinely and without drugs altered their state of consciousness, thereby releasing healing energy to the entire community” (1982:3). Katz defines states of consciousness as “patterns of human experience, which include ways of acting, thinking, perceiving, and feeling.” And he defines an altered state of consciousness as being “radically different from the usual everyday patterns” (1982:3). When the Kung were camped at a permanent watering hole, they conducted their communal, all-night healing dances as often as twice a week. If camped in the bush, the dances occurred only two to three times per month (1982:37). Katz noted that the healers had rich fantasy lives, which he pointed out were another type of altered state of consciousness. And, according to Katz, the Kung healing process demanded intuition and emotion rather than logic and rationalism, meaning such processes were valued in creating the Kung cultural, cognitive map (1982:236).

In contrast to the Kung, the modern, technologically-complex, American society of the year 2000 has no culturally-sanctioned role for altered states of consciousness except perhaps relaxation techniques for stress reduction. What is valued is “normal,” waking, rational consciousness. Perceptual processes such as dreaming, meditation, and intuition are not valued and are generally dismissed. According to Walsh, Western culture is monaphasic, that is, its worldview is derived from a single state: the waking state (1993:125). Walsh adds that in the Western world there is a need to "reduce this cultural myopia and to shift society, psychology and other disciplines from monophasic to polyphasic perspectives" (1993:125).

Drawing from personal experience in international development, I not only agree with Walsh but take his theory a few steps further proposing that when a culture restrains perceptual diversity, that same culture reduces human adaptability, which, in turn, leads to human beings living unsustainably. Unsustainable lifestyles result in ecological destruction, including destruction of biodiversity (or biocomplexity). In a feedback loop, degraded environments offer fewer choices to human beings for adaptability, and a downward spiral commences. If, indeed, perceptual diversity promotes human adaptability and indirectly promotes healthy environments, then perceptual diversity has a practical application in everyday life. Yet the value of perceptual diversity is not acknowledged by international development experts, who insist that only a monophasic worldview is valid. In fact, one of the steps to development is for a culture to jettison its perceptual diversity in favor of a specialized approach based on the scientific method and economic progress. The scientific method only acknowledges monophasic consciousness. The method is a specialized system that focuses on studying small and distinctive parts in isolation, which results in fragmented knowledge.

Systems theory emerged in the mid-twentieth century and takes a different approach from that of the scientific method.

By contrast, the systems approach attempts to view the world in terms of irreducibly integrated systems. It focuses attention on the whole, as well as on the complex interrelationships among its constituent parts. This way of seeing is not an alternative, but a complement, to the specialized way. It is more all-embracing and comprehensive,
incorporating the specialized perspective as one aspect of a general conception (Lazlo and Krippner 1998:54).

Furthermore, systems theory posits that when studying only the parts of something, one may be missing the value of the whole.

Structurally, a system is a divisible whole, but functionally it is an indivisible unity with emergent properties. An emergent property is marked by the appearance of novel characteristics exhibited on the level of the whole ensemble, but not by the components in isolation.

There are two important aspects of emergent properties: First, they are lost when the system breaks down to its components—the property of life, for example, does not inhere in organs once they are removed from the body. Second, when a component is removed from the whole, that component itself will lose its emergent properties—a hand severed from the body, cannot write, nor can a severed eye see.

The notion of emergent properties leads to the concept of synergy, suggesting that, as we say in everyday language, the system is more than the sum of its parts....(Lazlo and Krippner 1998:53).

In the same way, I see monophasic consciousness as one part of perceptual diversity—the part based on waking, rational thought and the scientific method. But the entire system of consciousness is far more complex and, in breaking it down and valuing only one of its parts, waking rational consciousness, one loses the value of the whole. I propose that in disavowing polyphasic consciousness (perceptual diversity), we may be losing the emergent properties of polyphasic consciousness. Coming from developed, Western cultures, which highly value monophasic consciousness and the scientific method, we may not even be aware of what we are losing. And it is altered states of consciousness, which speak through symbols and intuition, such as dreaming, imagining, and meditating, that often allow us to grasp the whole in a way that the scientific method can never provide.

**Cognitive Neuroscience, Embodied Knowledge, and Beyond**

Psychological anthropologist Erika Bourguignon finds that the majority of all cultures value transrational perceptual processes.

The presence of institutionalized forms of altered states of consciousness in 90% of our sample societies represents a striking finding and suggests that we are, indeed, dealing with a matter of major importance, not merely a bit of anthropological esoterica. It is clear that we are dealing with a psychobiological capacity available to all societies, and that, indeed, the vast majority of societies have used it in their own particular ways, and have done so primarily in a sacred context. Yet some societies have not done so, or had abandoned the practice before the time period for which the report, on which our coding is based, is valid (1973:11).
This means that transrational states of consciousness are statistically normal. In contrast, Western culture (particularly the fields of medicine and psychiatry) is exceptional in pathologizing all such perceptual processes, although recently there has been a shift away from this attitude. Social scientist Richard Castillo points out that how people construct reality "is mirrored in the neural networks of the brain" (1995:22). He adds that the gross brain anatomy of all human beings is similar; however, the ordering of the neuron's dendritic branches and the structure and function of neuron synapses vary culturally and individually. This is because the ordering of the neural networks is shaped by experiences as a person develops. Castillo states that: "This means that the organization of culture has its psychobiological correlates in the organization of the mind-brain" (1995:23). In using the word "mind-brain," Castillo suggests that the barriers between mind and body are not delineated and that whatever is happening physiologically in the brain is mirrored in the mind (1995:22). "Mind" to Castillo means something more than brain and body; it is a system extending beyond the self.

Cultures that are polyphasic in their approach to reality will be made up of human beings who have ordered their neural networks in such a way that they can more easily access a variety of perceptual processes. The more a person practices shamanic ecstasy, meditation, or spirit possession, the easier it becomes to enter these states because the individual has ordered his or her neural networks psychobiologically to access such states. Individual cultures will, thus, consist of people whose neural networks are similarly structured. Sub-cultures, such as traditional healers who practice divination, will be made up of persons whose neural networks are yet more similarly structured. And there will always be individual variations in neural networks because no person's experiences are exactly the same. The concept of neural network plasticity means that we must now conceive of the brain as a mind-brain because its micromorphology is constantly affected by experiences and, in the larger context, by culture (Castillo 1995:23). The concept of the mind-brain being affected by experiences suggests that knowledge is not only lodged somewhere in the brain but that it is also lodged in the larger mind, of which the brain is a part. Since the body is also a part of this larger mind, knowledge can be embodied; hence, knowledge does not make its home only in the human brain but also in the human body. The body can house knowledge of which the conscious mind is unaware.

Anthropologist Robert Desjarlais offers a vivid portrait of how knowledge can be lodged in the body as well as the brain. He had visionary experiences in the late 1980s when he was apprenticed to Meme Bombo, a Yolmo Sherpa shaman in north-central Nepal (1992:4). Desjarlais concluded that his visions were an imaginal form of embodied knowledge:

Yet I believe they [Desjarlais' visions] reflect the learning processes involved when a person participates in a series of rituals, frequents a tea shop, listens to a story, and so begins to embody cultural practices. In my experience, much of this learning occurs tacitly, at the level of the body; the trance images, as I read them, crystallized embodied forms of knowledge. Meaning, patterned within the body, took form through images, which were then absorbed anew by the body. This was an ongoing process throughout my stay, for when a fieldworker begins to participate in the myriad of moments that make up the practice of everyday life, these interactions soon shape his or her understanding of local values, patterns of action, ways of being, moving, and feeling. Whenever I exchanged sips of tea, caught the gist of a joke, heard the guttural sounds of a lama's chant, or felt the
loss of a villager, I was participating in my share of life in Helambu, and my body assimilated such experiences within its fund of meanings. It is out of that fund of knowledge that my understanding of Yolmo lives begins, and the trance imagery probably emerged. As I see it, the trances gave imaginal form to my body's conversation with the other bodies stepping about Helambu (1992:26).

Furthermore, Desjarlais discovered that his Western cultural methods of perceiving and, thus, of embodying knowledge affected his fieldwork in concrete ways. He reflected that:

As a Yolmo shaman acquires his bidya or "learning" without the use of books, villagers were perplexed by my preference to record Meme's teachings in cassettes and notebooks, rather than to set them directly within my "heartmind." I explained that, since we in the West had forgotten how to memorize, I would lose the specifics of what I learned unless I jotted them down on paper. This did not get me very far. "How can you play the drum if you have to refer to a book?" a group of young men scoffed one evening outside my cabin. When I joked that I planned to tack the chants onto the drum's surface like a musical score, they laughed, but walked away unsatisfied. I would never be a "true shaman," one novice healer said, shaking his head, unless I knew everything "by heart." For quite some time I took this man's response at face value: one must memorize the shaman's songs in order to perform effectively. Yet now, months away from Helambu, I hear, with some regret, a subtler message: it is the music as much as the surface meaning of the shaman's repertoire that one must engage within the flesh. By incorporating a mantra's magic within his heart, throat, and limbs, a melody echoing others through its sinewy folds and assonant rhymes, an apprentice healer begins to incarnate a sensibility that goes beyond the linguistic. The play of the drum quickens into a kinesthesia of curing, a mumbled mantra summons the presence of the sacred, rhythms of healing grow more tactile than cerebral: if I had better realized this chemistry while in the field, I might have gone about my apprenticeship differently, danced to another tune, and so expanded my field of awareness (1992:29).

According to Castillo, experience can be embodied in the brain and can form and alter the neural networks. And he adds that "the barriers between mind and body have become permeable and the permutations of the mind-brain have become observable" (1995:22). Desjarlais describes how experience and knowledge can be embodied. In fact, he is struck by the fact that due to having been brought up in Western culture, he has forgotten how to memorize, that is, he is slower to rely on embodied knowledge than his Yolmo, novice-shaman friend. There exists an entire system that can cultivate tacit knowledge that contains, but is more than, neural networks and that is also more than the body. Desjarlais cites Gregory Bateson as having helped him to understand this system (1992:26&184). Bateson states:

The total self-corrective unit which processes information, or, as I say, "thinks" and "acts" and "decides," is a system whose boundaries do not at all coincide with the boundaries either of the body or of what is popularly called the "self" or "consciousness" (1987:319).
Rites of Passage

Rituals are structured performances of cultural mythic perspectives, within which a “ceremony” is a maxi-ritual and a “rite” is a mini-ritual. According to anthropologist van Gennep, who studied the rituals accompanying an individual’s “life crises,” rites of transformation (rites de passage) could generally be divided into three phases: separation, transition, and incorporation (1960). Van Gennep explored the classification of rites and various transitional stages in human cultures such as pregnancy and childbirth, birth and childhood, initiation, betrothal and marriage, and funerals. He concluded that rites of passage allowed an individual who had undergone transition to be re-integrated into the group with a new role and status. He also pointed out that it was often the culture (and not just the individual) who had to readjust to the rite of passage and find a place to put the transformed individual into its system of social organization (1960).

What van Gennep called “transition,” anthropologist Victor Turner labeled the "liminal" meaning a threshold stage prior to a new way of being. Turner illustrated that ritual broke down existent perceptual-constructs or cognitive maps and replaced them with new ones (1967:93-111). He explained that ritual process could involve growth and transformation and the "reformulation of old elements in new patterns" (1967:99):

The arcane knowledge or "gnosis" obtained in the liminal period is felt to change the inmost nature of the neophyte, impressing him, as a seal impresses wax, with the characteristics of his new state. It is not a mere acquisition of knowledge, but a change of being. His apparent passivity is revealed as an absorption of powers which will become active after his social status has been redefined in the aggregation rites (1967:102).

Rites of passage, then, are embodied by the individual, including changes in the person's neural networks, and this process occurs with the aid of community. The process of transition occurs not only within the body and mind of the individual but within the community as well—a sort of fission of the two that is synergistically more than either individual or community. And this holds true whether or not the rite of passage is perceived in a positive light, such as an initiation into manhood in a tribal society, or in a negative light, such as a woman being divorced and falling into depression in a Western society. Both situations demand the interaction of individual and community but are more than either entity; both situations are part of an interactive synergistic system. As Bateson says, "The network is not bounded by the skin but includes all external pathways along which information can travel" (1987:319s). The rite of passage is not bounded by the "skin" of the individual who lives within a society but includes all "external pathways" between individual and culture through which information can travel to create the process of transformation.

Ritual and Healing

Extrapolating from this, traditional healers are activating psychobiological changes in ill patients when treating them by using ritual. And they also may be activating changes in the larger system, or culture, that allow for healing to occur. Hence, biomedical professionals should not dismiss the use of perceptual modes and treatments used by traditional healers (such as divination, intuitive "seeing" or diagnosis of illness, ritual curing, etc.) for several reasons: (1) traditional healers may
be accessing information about patients in a way that seems implausible to those trained in biomedicine but that actually works, (2) ritual treatment of illness may be altering patients physiologically through reordering the patients' neural networks and/or through reordering other systems that cause the patient to embody illness, and (3) traditional healers by working with the family or community as well as the individual may be reordering social structures and relationships in such a way as to cause a shift that allows the patient to heal physiologically, mentally, or emotionally. Indeed, it is an accepted tenet by most biomedical professionals that the mental and emotional states of a patient affect healing.

Desjarlais' interpretation of shamanic divination explains that the shaman is more sensitive to the sensations of others (both physical, mental, and emotional) than most people and that the shaman has been trained to have a strong empathizing ability. Indeed, from the perspective of cognitive neuroscience, this ability to perceive in a different way reflects a trained reordering of the neural networks in the brain. Desjarlais writes:

My sense is that the information conveyed through shamanic divination often relates to tacit forms of knowledge latent within the bodies of patients and viscerally assessed by healers....Somatic sensibilities exist on a tacit, visceral level; usually, villagers are only vaguely aware of the forces and tensions that occasion them. It is for this reason that the afflicted ask shamans to divine the causes of their malaise (1992:180).

Yet why can only shamans divine? It appears that shamans are particularly sensitive to bodily dispositions and have the ability, in trance, to convey the underlying forms, tensions, and sensibilities intrinsic to a situation. Meme [a shaman] has the ability to "read" the pulse of a family—the diffuse tensions that can haunt bodies and households—as if the extraordinary state of trance enables him to both hear and voice the basic chords of Yolmo experience as they take form....A shaman's body admits a certain potential for empathy, an empathy of form, where one body makes sense of another (1992:182-183).

Shamans are particularly adept at reading others in an intuitive manner. At the other end of the spectrum are those who have been educated according to the scientism of Western culture.

It is necessary to distinguish...between science as a broad project of enhancing and deepening human knowledge, and scientism as an effort to circumscribe the scientific enterprise by positing criteria such as reductionism, experimental method or quantification as essential components. By such restrictive criteria, Darwin's research would be excluded from science, along with many other inquiries resulting in valuable scientific knowledge (LeVine 1996).

This does not mean that such methods are not useful, only that they are not the only criteria by which the world should be judged.

Richard Katz noted that the Kung had a spiritual connection with each other, with nature, and with the cosmos (1982). The purpose of the Kung's dances was to allow an individual to raise num, which boiled fiercely and then rose like kundalini, allowing that person to heal other members of the community. Katz's research with the Kung led him to conclude that Westernized youths suffer from identity "diffusion" as a consequence of living in a monophasic culture (that is
a culture that only validates one way of perceiving reality—that of waking reality) (1973:136-155).

Lacking an education in the transcendent or, to phrase it in another way, in the ability to empathize kinesthetically, many Westerners do not have a sense of having a place or role in the universe. This can consequently lead to people seeking the transrational (what they perceive to be an "altered state of consciousness") through drugs and alcohol. Drugs and alcohol, in turn, often lead to addiction (Grof and Grof 1992). Addicts have found that a spiritual program is one of the best ways to beat addiction. Alcoholics Anonymous, the most successful alcoholism treatment program available to Westerners, openly espouses spirituality as a vehicle to wellness. It is worth noting that this self-help group is highly ritualistic in its healing methods: using twelve steps, a protocol for communication that insists there be no "cross-talk," having a structured social support system, and insisting that alcoholics acknowledge (empathize with) others whom they have damaged by their abuse of alcohol.

In all cultures but particularly among non-Western cultures that are rapidly undergoing change at this point in history, alcoholism and other forms of addiction become pervasive as cultural breakdown occurs. Cultural breakdown includes a creeping disbelief in the validity of formerly acceptable perceptual processes. Modes of perception that were valid in the past, such as healing by using divination and ritual, beseeching spirit animals for a good hunt, or conducting ceremonies to increase agricultural fertility, are rendered superstitious and meaningless. Perceptual modes that were previously in use in a culture, even if they were not used by all, are devalued and slowly move to the margins of that culture. In essence, non-Western cultures undergoing rapid change (due to being impinged upon by global economics and global communication) start to replicate the dominant Euro-American cultures that are affecting them. Just as in the USA where belief in dowsing, faith healing, shamanism, and the like still exist but have little or no validity, in the so-called developing nations intuitive perceptual modes lose their status to be replaced by the reigning belief system, which is scientific reductionism. When intuitive perceptual modes are denied status and validity, many people turn to alcohol or drugs as a means to access "altered states." This is true even if the individual is not personally accessing a transrational state but is benefiting from another individual accessing that state.

For example, when Richard Katz lived among the Kung, he found a model for community healing in which one-third of adult Kung altered their perception in order to heal the entire community (1982:3). But those individuals who did not raise num (the healing energy) were not stigmatized by the community, because everyone knew that there was plenty of num to go around and that it would be shared by all. Furthermore, a good hunter, a good gatherer, or a good story-teller was as valued as someone who was especially adept at raising num.

Using another example, when I conducted research on traditional medicine and its use among communities in Namibia, I found that traditional healers often helped patients to access transrational states (usually through ritual); however, sometimes healers accessed transrational states for their patients in order to divine the cause of their illnesses and intercede on the patients' behalf. As with the Kung, less importance was placed upon individual access to transrational states and more emphasis was placed upon the healing power that access to such states provided for the patient. Among the hunter-gatherer Kung, healing energy or num was shared by the whole community. Among the indigenous people, with whom I worked in Namibia, who were agriculturists, pastoralists, and urban dwellers, healing power was not always shared by the
community. In some areas, healings were conducted with patient, traditional healer, and some community members. In many situations and particularly in urban areas, the healer worked with the patient and some members of the patient's family, who usually accompanied the patient to the healer's abode. And occasionally, when family and friends were not available, which was more common in urban areas to which people had migrated without family, the patient and healer worked alone.

**Relationship between Perceptual, Cultural, and Biological Diversity**

If people's health can be improved by going to a shaman or by using perceptual processes such as ritualistic healing to heal themselves, as I concluded in the previous section, then what is the connection between using intuitive perceptual processes and maintaining or increasing the health of ecosystems and the biosphere? I propose that cultures that validate the use of a variety of perceptual processes, that is cultures whose reality is polyphasic, are more likely to take better care of the environment than are monophasic cultures.

As Bruce Wilcox, Director of the Institute for Sustainable Development, and biologist Kristin Duin pointed out, non-indigenous and non-traditional societies usually do not have the same rational utility approach to natural resources as traditional indigenous peoples. Non-traditional peoples degrade and deplete their resources in an unsustainable manner (Wilcox and Duin 1995:49-51). Conservation of natural resources among indigenous peoples is "effectively based on a knowledge of functional utility and institutionalized in the form of taboos" (Wilcox and Duin 1995:51). Wilcox and Duin have documented a strong positive correlation for ecological diversity and cultural diversity (1995). Regions that are biologically diverse tend to have many distinct and diverse cultures, the exception being mangrove swamps, which are biologically diverse but do not support a correlative number of indigenous populations (Wilcox and Duin 1995:53). Research conducted by Machav Gadgil of the Indian Institute of Science in Bangalore and his collaborators revealed that traditional endogamous groups in India divided the available biological resource base so that different groups could exploit different niches. For example, some groups specialized in honey gathering, others in shifting cultivation, etc. (Wilcox and Duin 1995:49). This type of resource exploitation is far more efficient than industrialized resource exploitation that homogenizes the resource base reducing biocomplexity and cultural diversity (Wilcox and Duin 1995:49). Furthermore, as Wilcox and Duin point out, utility of resources depends upon the perception of the user of those resources (1995:51): where an industrialized resource user might see only trees that can be cut into board-feets, a traditional honey collector might see trees that can hold honey.

Wilcox and Duin's research shows that people who derive their sustenance from their immediate environment (generally indigenous peoples) are concerned with maintaining the health of that environment. Western and non-Western industrialized people who derive their sustenance from distant resources with which they are not intimately connected do not maintain the health of those environments (Wilcox and Duin 1995:50-51). Although the latter may have knowledge that their consumption is unsustainable and may suffer some angst over this awareness, they usually do not take strong steps to protect the environments upon which they depend. Wilcox and Duin explain:
Industrial development generally results in the transformation of environmentally heterogeneous landscapes into ones dominated by large blocks of state or privately controlled lands used for intensive agriculture, plantation forestry, parks, industrial activity, and urban settlements. There presumably is much to be learned by societies engaged in industrial modes of production from cultures whose production systems are compatible with or may even enhance intrinsic levels of biodiversity. By "intrinsic levels" we mean amounts of habitat, species, and genetic diversity comparable to that which would exist in the absence of human activity. It has become a more or less accepted principle among ecologists that moderate levels of physical disturbance, such as often imposed by traditional forms of resource exploitation, enhances ecological complexity, landscape heterogeneity, and species diversity, thus promoting overall biodiversity (1995:49-50).

A forest-dwelling honey gatherer has a different way of perceiving a forest from a lumber corporation chief executive officer (CEO). And a forest-dwelling honey gatherer lives in a different culture with different values from a lumber corporation CEO. Honey gathering demands an ability to observe nature, in this case bees, and to follow bees to honey. It also demands a synergistic awareness of the environment (nature) so that one can locate bees and honey. The perceptual process best suited for nature awareness is a process whereby a person makes his or her mind very still so that it can pick up what is occurring in the environment and then act on it. This receptivity process may result in a specific awareness, for example the distant thin hum of bees, or it may result in a less specific awareness (an intuitive pull) in a direction that feels like bees. The latter, a sense of bees being in one direction, is likely the result of the honey gatherer's receptive mind picking up subliminally available data. The honey gatherer has learned to use a type of perception that industrialized people might describe as intuitive, receptive, or meditative. This intuitive capability has a practical application for the honey gatherer: it makes honey easier to find. Hence, the honey gatherer will hone this intuitive process. When the mind and body are emptied of their plans and agendas, the mind-body can become receptive enough to intuit where bees are, much as the shaman intuits what a patient is feeling and what is going on in the community that contributes to a patient's illness. The lumber company CEO on the other hand has no need to access multiple states of perception. The CEO uses rational logic based on economic measurement, and leaves it at that. In fact, admitting to using any other perceptual-construct would be considered unprofessional.

A well-documented example of what can occur when a culture uses only the rational logic prescribed by the criteria of “science” (reductionism, experimental method, and quantification) was the experience of rural women cultivators in India during the green revolution. Green revolution scientists promoted new high-yield-variety (HYV) crops. These new crops had a higher yield of grain seed and a lower yield of fodder than the older varieties. In India, it is women's work to collect fodder for animals. The new high yields, however, made this difficult. For example, the commercial variety of sorghum produced only short and hard straw that could not be used as fodder. Since it was women's work to find fodder, this increased their workloads and had an adverse effect on animal husbandry, which, in turn, adversely affected family nutrition (Venkateswaran 1995:30). Furthermore, the new high yield varieties were meant for export and were sent to market, rather than brought into the home, which further reduced women's power
within the household (Venkateswaran 1995:31). Development researcher Sandhya Venkateswaran quotes an agroscientist in Mazumdar, India, in 1992 as saying:

When we (the scientists) were promoting the high yielding variety of paddy decades ago, the only group who put up any resistance were rural women...women from cultivating peasant households. Of course, we brushed them aside as illiterate ignoramuses. What did they know? We were the scientists. Today when I see the damage that HYV technology has done to our granary, I am reminded of that resistance. I don't know why they were resisting, because I never listened (1995:169).

In conclusion, aspects of the green revolution disempowered women and created or exacerbated rural malnutrition even though the intent was to do the opposite: to reduce malnutrition and to empower poorer countries, although not specifically rural peasant women. It has even been proposed that dowry-related violence against women increased in those areas of India where the green revolution flourished (the Punjab and Haryana), because the green revolution reduced women's status within the household (Venkateswaran 1995:31).

Others have pointed out that development often has more negative than positive consequences. One of the most damning books, *The Road to Hell: The Ravaging Effects of Foreign Aid and International Charity*, written by former Peace Corps and aid worker, Michael Maren, documents the negative effects of the aid business (most particularly food aid) upon the environment, economies, and governments of countries such as Kenya, Burkina Faso, Nigeria, Rwanda, Sudan, and Ethiopia (1997). As Maren points out, dumping large quantities of food in countries alters internal politics, economics, the environment, and cultural traditions. Those who want power are quick to understand that controlling aid, often the primary source of money in a country, is the way to power and riches. Corruption becomes rife as aid is siphoned off into private bank accounts, used to buy arms, used to create environmentally degrading projects, and used to control “refugee” populations that can be maneuvered for political and economic gain. Countries that receive large and rapid infusions of aid become politically corrupt, which eventually leads to political instability. Russia has been suffering since the fall of the Soviet Union from too much aid too fast as the United States attempted to create capitalism without democracy. Grôrard Prunier, an historian of the Rwanda genocide of 1994, points out that Rwanda was once a shining example of a country that aid had helped to build. Under the Habyarimana regime (1973-1994) the country was orderly, neat, and clean. However, by 1991, 22% of its gross national product was made up of aid money (Prunier 1995:79). The aid game was the easiest way for local elites to make money. During the 1994 genocide, the ruling government made sure that aid money kept flowing into its coffers, using that money to continue the genocide. Later, once the Tutsi-dominated Rwandan Patriotic Front had taken Rwanda, leading to Hutu refugees fleeing into the neighboring country that was then called Zaire, Hutu extremists (who had organized and participated in the genocide in Rwanda) used Hutu refugee food aid to control the Hutu refugee populations in an effort to stage an invasion to re-take Rwanda (Prunier 1995). The examples of aid money being exploited by local elites and resulting in destabilization are numerous in Africa and elsewhere. Now, in the year 2000, the Congo, formerly Zaire, is immersed in a bloody civil war that also involves Angola, Namibia, Zambia, Uganda, Rwanda, Burundi, Sudan, and Tanzania. The Congo, under Mobutu Sese Seko, had received fulsome quantities of aid money during the Cold War, most of which was pocketed by elites.
Wilcox and Duin have shown a linkage between indigenous cultural diversity and biocomplexity. And I have tried to link indigenous cultures’ use of multiple perceptual processes, including intuitive capabilities like those of the honey gatherer, to an ability to take care of and know an ecosystem at a deep level. Katz has pointed out that lack of access to transrational perceptual processes can lead to identity diffusion, to a sense of feeling as if one does not have a place or role in the world, and I have suggested that people who do not have a sense of their role in the world are far more likely to destroy and degrade that world. It is interesting to note that industrialized nations with their strongly monophasic cultural approach have caused substantial environmental destruction. Much of the destruction that has occurred worldwide in the last half of the twentieth century has been caused by well-intentioned but naïve aid programs that disrupted local cultures, economies, environments, and governing systems.

Social and Cultural Adaptability

Perceptual diversity allows an individual or a culture to look at an issue from many different angles, using different ways of accessing knowledge relevant to that issue. An individual or culture that uses a variety of perceptual processes to understand change is better able to adapt to that change or to resist that change if it is having a largely negative impact. Perceptual diversity, thus, promotes healthy social and cultural adaptation. Western culture, with its validation only of monophasic perception, undermines transrational perceptual modes—the very tools that most cultures and societies need in order to survive transition. Education, biomedicine, global economics—the tools Western culture offers to cultures it is in the process of dominating and changing—are most often based upon an understanding of reality as monophasic. The result is that these tools often end up destroying the perceptual texture of the cultures they are supposedly trying to help.

Epistemology of Science

As previously noted, “science” is the belief system at this time that dominates Western cultures and is upheld by the strategic elites of many “less developed” nations. I prefer to use the word “scientism” to “science.” Scientism is fundamentalist in its tenet that there is only one acceptable perceptual mode: rational logic. The history of science offers important clues as to how this situation developed. Scientism posits that all scientific knowledge must undergo the tests of reductionism, the experimental method, and quantification. But as anthropologist Robert LeVine points out, science is actually "a broad project of enhancing and deepening human knowledge" (1996). Scientism suffers from an epistemological flaw—an erroneous belief in a dated concept of objectivity that has its historical roots in the Age of Enlightenment, which took place in Europe in the 17th and 18th centuries. This pervasive belief in the absolute reality of objectivity and the concomitant belief in progress have been transformed into an ideology that is thought to be scientific but that actually is not.

I paraphrase anthropologist Lee Drummond: Positivists who think of themselves as following the scientific method and who believe in a simplistic cause-and-effect determinism are actually less close to the world described by scientists investigating physics, cosmology, and chaos theory than are interpretivists who have been influenced by postmodern literary criticism and
philosophy who often consider themselves to be anti-science (1995, 1&4). Drummond adds, "Curiously, their [positivists' and interpretivists'] discord arises from telling themselves the same myth: that of science (or Science) as an ideological affirmation of a world of cause-and-effect determinism" (1995:4). The fact is that science has passed far beyond mechanistic theories of cause-and-effect determinism, but, nevertheless, the rest of the world has not caught up. Objectivity, according to physicists and chaos complexity scientists, is intersubjective and context-specific; objectivity no longer exists in science as a real separation into object and subject categories (Drummond 1995:4).

A great deal of time, money, and energy has been wasted by the development community in insisting that its programs be based on science but that are actually based on scientism. Nongovernmental organizations and other groups who are more grassroots-oriented may try and buck the system; however, they usually find that donor agency purse strings and other forms of aid are controlled by the strategic elites, who insist that scientism is science.

There is a need now to move away from scientism and the ideology of cause-and-effect determinism toward a radical empiricism, such as William James proposed, as an epistemology of science. James insisted (1) that science should be grounded in direct experience, and (2) that no experiences should be excluded from investigation by science (Taylor 1994:353-354). According to researchers Laughlin and McManus:

   ...James was profoundly suspicious of rational exercises that were not grounded in direct experience. He considered rationalism to be a fallacious epistemology that reifies abstractions which may or may not be associated with instantiations in experience" (1995:35).

For James, instantiations in experience were experiential instants—pure experience that James believed the mind built upon to create a picture of the world. This process occurs so rapidly that a person in the mode of normal, waking consciousness is rarely even aware it is taking place. James's radical empiricism paid attention to these instantiations and to how the individual created an experience from them. Thus, the relations between instantiations had to be experienced relations not merely abstractions. In this manner James countered Descartes and Kant whose philosophical views alienated consciousness from direct experience. For James, science had to be rooted in experience, not merely in abstractions (Laughlin and McManus 1995:35-36). While working during the first and second decades of the twentieth century, James noted that rationalist science (scientism) emphasized fragmentation and disconnection. James, however, was interested in connective relationships, that is, relationships that pulled the instantiations of experience together to ultimately create a worldview (Laughlin and McManus 1995:36). Perception, then, affects meaning.

Over seventy years later (in the late 1980s) development expert and grassroots activist Vandana Shiva remarked upon how science fragmented and disconnected knowledge. She also explained how scientism oppressed women, pointing out that this fragmentation and disconnection of knowledge was actually a "masculinization of knowledge." According to Shiva, science (what I call scientism) has three unique aspects:
• its intrinsic reductionism and fragmentation;
• its separation of the knower and the knowledge; and
• its union with economic power (1995:15).

She adds that reductionism has led to loss of biocomplexity and to "monocultures of the mind" (1995:15). Separation of the knower and knowledge, as well as the union of science and economic power has led to "the creation of monopoly in knowledge, the latest expression of which is intellectual property rights" (Shiva 1995:15). Shiva's linkage of agricultural monoculture to monoculture of the mind is similar to my tenet that there is a need for perceptual diversity. I would also carry the concept of "monoculture" beyond its agricultural meaning into a cultural context by pointing out that as long as development remains a slave to scientism, it will continue to leave in its wake a worldwide monoculture rather than cultural diversity and biocomplexity.

Only recently has there been a burgeoning interest among the development community in indigenous knowledge systems and ethnoscience. This interest is primarily found among environmental non-governmental organizations and among community-based resource management planners. The other groups that have shown interest in indigenous knowledge are anthropologists, ethnobotanists, and pharmaceutical companies. Pharmaceutical companies are interested in indigenous knowledge if it leads to "discovering" new chemical compounds to treat disease, which in turn makes them money. There is far less interest in the fact that many traditional healers discovered the medicinal properties of plants by using perceptual modes such as intuition, communication with plants, trance, dreaming, etc. In general, funding for research on perceptual modes is not considered to be the purview of scientific medicine but rather of cultural anthropologists and folklorists. The pharmacology of medicinal plants is deemed "real" because it operates under the rubric of scientism (and can deliver a healthy profit to a pharmaceutical company as well), whereas a traditional healer's transrational process of accessing knowledge about medicinal plants holds little interest for those doling out scientific research and development funds.

Sometimes plants are collected to undergo analysis by scientists working for pharmaceutical companies. If a chemical compound is found that might be useful in treating disease, the pharmaceutical company then claims to have "discovered" the active chemical compound in the plant. Pharmaceutical companies can even patent this discovery meaning that the indigenous peoples who have used the plant for years receive no economic benefit from their plant merely because their discovery process was not "scientific." As Michel Foucault has pointed out, power determines what is knowledge and, hence, what is reality (1980). Until the plant that had been used by indigenous people for years was subjected to a specific methodological analysis, it did not exist and was not "real." Once the plant was discovered via the criteria of scientism, it belonged not to those who had used it for years but to the "discoverer," the person or culture with power.

William James was careful not to merely reinforce power structures when he looked at science. He believed that both connective and disconnective relations were relevant for science, but he noted that connective relations were treated by science as somehow transcendental or illusory and, thus, were not considered relevant (Laughlin and McManus 1995:36). Today, in development, exactly the same problem exists: Although there is a stated desire for participation, which demands connection and crossing of boundaries, scientism has rendered it taboo for Westerners and those trained by Western educational systems to accept that connective relations
can be scientific. Basically, even if a medical doctor's own phenomenological experience shows that a traditional healer's diagnosis by dreams and divination results in beneficial treatment of a majority of patients (particularly considering the tools and medicines available to the healer), the medical doctor is not able to fit this into the ideology of science and, thus, usually dismisses this phenomenon while simultaneously espousing the need for collaboration between the biomedical health sector and traditional medicine. No wonder traditional healers tend to resent this "collaboration," since it is usually one-sided and disrespectful. At the same time, being practical, traditional healers have noted that biomedicine often works, and usually they are willing to put up with a little disrespect if it means gaining access to skills and tools that will make them better doctors. As James noted, science overlooks that connective relations are phenomenologically experienceable and that these connective relations constitute consciousness (Laughlin and McManus 1995:37). Science as ideology insists instead that knowledge and experience must be reduced and fragmented to be valid. This is the anti-thesis, however, of what physics and other hard sciences are revealing today.

Neurognosis

Laughlin, McManus, and d'Aquili have taken James's radical empiricism even further, forming a theory of neurognosis that draws heavily from developmental psychology, a field of knowledge that was unavailable in James's day. They explain neurognosis as "... genetically predisposed cognitive-perceptual structures, and the nascent knowledge of self and world that is the functioning of those structures" (Laughlin and McManus 1995:40). They theorize that these structures develop as children grow and are, therefore, strongly affected by what children learn, that is, by culture (Laughlin and McManus 1995:40). Neurognosis then dissolves the nature/nurture dilemma by illustrating that there is an interaction between the two, that the environment and culture affect the physiological wiring of the brain (the neural networks) and of the body, and that at the same time there is probably a genetic predisposition for certain types of processes (Laughlin 1992:17-22).

International Development

The concept that a variety of ways of perceiving reality is necessary for human and global survival has strong applied implications, particularly in the field of international development. For example, while conducting research on traditional medicine in Namibia, I became aware that the primary impasse to cooperation between biomedical personnel and traditional healers was the inability of the biomedical and development communities to acknowledge that perceptual processes used by traditional healers could be valid.

Unfortunately, the need for a variety of perceptual modes has yet to be consciously acknowledged by most development theoreticians and project implementers, who usually still try to enact policy and participatory projects while relying upon dominant positivist scientism. Perceptual diversity and, in turn, cultural diversity and biocomplexity are often unwittingly threatened by the very people who believe they are trying to protect them.
In development, there is regular talk about “empowering” people and creating projects that are “participatory.” Unfortunately, this is easier said than done. What does it mean to empower someone? Who defines what being empowered is? All to often the process of empowerment means replacing polyphasic cultures with monophasic ones. Even education can result in merely educating youth in the Western, monophasic perceptual mode, teaching them that this specialized type of perception is the only valid reality. For example, educated students who had completed secondary school or who were in university worked with me as interviewers when I conducted research on traditional medicine in Namibia. Only two out of ten of those students (one who had masters level education from Finland and one who had graduated from university in Namibia) were open to the possibility that traditional healers could actually diagnose using transrational means. The others, who had been "educated," which was supposedly going to empower them, dismissed their own traditional healers out of hand as “superstitious” and “unscientific.”

Robert Chambers, a fellow at the Institute for Development Studies at the University of Sussex, states:

...poverty and deprivation prove robustly sustainable. Why? The usual response is to seek answers by analyzing poverty and deprivation themselves. It is not surprising that we in power do not like to examine ourselves. To salve our consciences we rationalize: The objects of development are the poor anyway, not us. It is they who are the problem, not us. But poverty and deprivation are functions of polarization, of power and powerlessness. Any practical analysis has to examine the whole system: "us" as well as "them." ....Whose reality counts? The reality of the few in the centres of power, or the reality of the poor, the many at the periphery? ....What is recorded as having been measured—often low consumption—masquerades in speech and prose as a much larger reality. It is then but a short step to treating what has not been measured as not really real. Patterns of dominance are reinforced: of the material over the experiential; of the physical over the social; of the measured and measurable over the unmeasured and unmeasurable; of economics over disciplines concerned with people as people. ....While we have been quick to grasp the potential of concepts such as "participation," "ownership" and "empowerment," we have been slower to recognize the changes these concepts demand of us. We have failed to understand that participation by them means non-ownership for us. Empowerment for them means disempowerment for us. Much of the challenge has to do with both power and ownership (1995:14-15)

Knowledge (and the education that provides it) is more slippery than one likes to believe. As David Aldridge, professor of clinical research at the Faculty of Medicine at the University de Witten Herdecke, says, "Belief in mathematical abstraction is an act of faith" (1993:83). Furthermore, if the former is true, then believing in economic systems that are based on dated accounting techniques, which assume the natural world to be an endless supply of resources, is patently absurd. Yet that is exactly the philosophy that current global economics is based upon. Strategic elites believe development will function best under free market economics. It is not surprising that this economic ideology does not threaten their power. However, what if this is the wrong approach?
There is, indeed, a great deal that points toward the fact that it is the wrong approach. Economic development has in many cases resulted in overall poorer health. It has resulted in migration of populations searching for wage-labor settling in crowded shanty-towns. Sometimes, as with miners in South Africa, only the men migrate resulting in family breakdown and the spread of sexually transmitted diseases and HIV/AIDS. Subsistence crops are replaced by cash crops and traditional food sources become more expensive and are replaced by less nutritious foods.

Furthermore, neo-liberal economics does not acknowledge the existence of women's unpaid labor (Waring 1990), nor does it have a method to account for the value of unused natural resources (Murphy 1994). Both women's unpaid labor and a standing forest are shadow-subsidies that prop up supposedly market-driven economies. For example, a forest under current accounting systems is registered as having no intrinsic economic value unless it is turned into board-feet. The value a forest has in providing oxygen, habitat for animals, preserving watersheds, etc., is utterly irrelevant to the current economic system. Free market economies are, therefore, only “free” for the people who are not being exploited by them. The home-maker who is considered unproductive, a forest that has no value until a corporation cuts it down—these are the entities rendered invisible in economic accounting systems. Free markets without free and just societies that value women's labor and natural resources are simply a license for the powerful to plunder. Nor should it be overlooked that free market economies do not usher justice into a society (Dale 1995; Murphy 1994; Waring 1990). The reality is that in no country on earth do women have the same opportunities as men, including so-called developed nations (Haq 1995). In fact, homemakers in the USA and Canada are still considered “unproductive” in economic terms and this is reflected in census-taking methods (Christian Science Monitor 1995:13).

The World Bank and United Nations are developing a new system of national accounts that will reckon the true costs of pollution and the worth of resources left unplundered (Haq 1995:87-98; Knickerbocker 1995:7; Repetto 1992:12-20&43-45). There seems to be little political will, however, among US politicians and among the people themselves to jettison the gross domestic product (GDP) and move toward sustainable development accounting systems. The World Bank's and United Nations' "green" accounting systems seem a long way off from worldwide adoption. The reason for this is simple: in the short term, the rich and powerful (the strategic elites), particularly transnational corporations, would lose money if green accounting was adopted.

Namibia—A Case Study

To illustrate from an applied perspective how perceptual diversity can be used in development, I will now focus on research that I conducted in Namibia from 1993-1994 on traditional healers and community use of traditional medicine.

Survey Background

Eighty-percent of the world's inhabitants rely on traditional medicine to keep them well (Akerele 1990:390). There are numerous different types of traditional medicine, and many people use both modern medicine and a variety of traditional medicines either concurrently or serially to treat
illness. Some traditional medicine modalities rely on transrational constructs for diagnosis and healing. Whether transrational constructs are acknowledged or understood by biomedical professionals or not, a significant portion of the world's health care-seeking population comes into contact with these transrational constructs. In 1977 the World Health Organization (WHO), acknowledging that a majority of the world's population used ethnomedicine, passed a resolution to promote the development of training and research related to traditional medicine. The following year in Alma Ata, WHO issued additional resolutions supporting the use of indigenous health practitioners in government-sponsored programs. Seven years later, in 1984, WHO and the United Nations Children's Fund (UNICEF) suggested that governments upgrade traditional healers' skills rather than replace indigenous healers with cadres of new community health workers.

Nevertheless, for a variety of reasons by the end of the 1980s there had been little progress in getting African health ministries to collaborate seriously with traditional healers (Green 1994:25). One reason for this lack of progress was that African and international biomedical health professionals had difficulty acknowledging perceptual diversity. They resisted the possibility that intuition, divination, and ritual could be valid methods of perception for diagnosing and treating illness, and believed only in the scientific method. However, despite this strong belief in biomedicine, there were not enough resources to provide biomedical health care to populations who needed it. Clearly, some sort of new working collaboration between traditional healers and biomedical professionals was necessary if health care was to become available to those in need of it.

After Namibia obtained independence from South Africa in 1990, traditional healing was no longer prohibited. However, because traditional healing had been prohibited, little research was available on the subject even though such basic research was necessary to promote collaboration between the modern health sector and traditional medicine. In July through August, 1993, I undertook a six–week pilot study on traditional medicine in the capital city of Windhoek and in the nearby peri-urban area of Katutura (Lumpkin 1993). UNICEF, in collaboration with the Ministry of Health and Social Services (MoHSS), subsequently agreed to support a follow-up qualitative survey on traditional medicine in three regions: the North East, North West, and Windhoek/Katutura (Lumpkin 1994). Fieldwork, data-compilation, and report write-up took approximately seven months. The survey's objectives were: (1) to gather qualitative data on traditional healers and their knowledge, attitudes, beliefs, and practices, and (2) to gather qualitative data on community members' use of traditional medicine. The ultimate goal was to promote cooperation between traditional healers and biomedical practitioners. This was particularly important at the time because HIV/AIDS (human immunodeficiency virus/acquired immune deficiency syndrome) had just reached the country. The survey used in-depth, key informant interviews to gather data from 88 traditional healers. Focus groups were held with 112 community members to gather information on community use of traditional medicine and to cross-check information gathered from traditional healers. Non-random, purposive sampling techniques were used to locate traditional healers and community members for interviews.

My research revealed that the transrational perceptual processes used by Namibian traditional healers had a strong role in promoting an ecological concept of illness. A majority of Namibian traditional healers regularly used a variety of perceptual processes, including divination and ritual
curing, to diagnose and treat patients. Transrational processes facilitated placing illnesses in a holistic framework and so improved community health.

**Personalistic and Naturalistic Etiologies**

Medical anthropologist George M. Foster argues that non-Western medical systems can be divided into two groups according to the two principal etiologies involved: personalistic and naturalistic. He states:

> Correlated with personalistic etiologies are the belief that all misfortune, disease included, is explained in the same way; illness, religion and magic are inseparable; the most powerful curers have supernatural and magical powers, and their primary role is diagnostic. Correlated with naturalistic etiologies are the belief that disease causality has nothing to do with other misfortunes; religion and magic are largely unrelated to illness; the principal curers lack supernatural or magical powers, and their primary role is therapeutic (1976:773)

Personalistic etiologies assume that an agent (human, non-human, or spiritual) has victimized the sick person. The healer uses transrational processes such as divination, scrying, dreaming, communicating with spirits and ancestors, and other intuitive modes to heal the patient by rooting out the underlying cause of the illness. Such methods are not needed for naturalistic etiologies. These systems rely on an equilibrium model, hence the healer need not focus on the underlying supernatural cause of the illness but on re-balancing the patient who has become unbalanced.

Although Foster states that some personalistically-inclined healers such as shamans do not differentiate between illness, religion, and magic, he overlooks the fact that this may be because they are concentrating on process and are using a transrational perceptual mode to "see" the process that has caused the illness. This is quite different from merely believing in magic; it is directed inquiry using a transrational perceptual mode. Yes, the healer has "supernatural" powers but the word "supernatural" should not be read pejoratively but as having perceptual insights beyond those of normal, waking reality.

In Namibia, traditional healers believed in both personalistic and naturalistic etiologies. A little over three-quarters of the 88 interviewed traditional healers were diviner-herbalists meaning that they diagnosed using transrational processes and by looking at patients' physical symptoms. They then treated patients by manipulating the spirit world and by giving them herbs. These healers usually believed that the etiology of an illness was personalistic and that even when treating a patient with herbs, it was the spirit of the herb that healed the patient. However, most traditional healers also said that there were some illnesses that just happened and these were considered to be naturalistic.

Namibian biomedical professionals tended to dismiss traditional healers personalistic paradigms because trained intuition was not considered scientific. Such a conclusion seems hasty. Available data in cognitive neuroscience points out that neurons' dendritic branches and the structure and function of neuron networks are shaped by individual experience and by culture (Castillo 1995:17-34). This means that traditional healers' training affects their neural pathways making
them more adept at intuitive processes for diagnosing and healing illness. Furthermore, Desjarlais' has pointed out that traditional healers are also adept at kinesthetic empathy, making it easier for them to diagnose and treat patients, including patient-community interaction.

**Illness and Disease**

I would now like to explore the concept of illness and the biomedical concept of disease. From a Western biomedical perspective, "disease is an undesirable deviation from a measurable norm" (Scrimshaw and Hurtado 1987:4). Disease is believed to be caused by a pathogen or pathogens that negatively alter the condition of an organism, which, in turn, impairs normal physiological functioning. Emphasis is placed on physical symptoms—on the concrete rather than process. Illness, unlike disease, is simply an absence of well-being that results in the individual not being able to function in the usual manner (Scrimshaw and Hurtado 1987:4). Not all disease is considered to be illness. For example, people can suffer from hypertension (a disease in biomedical terms) but not feel badly and, thus, not think of themselves as ill (Scrimshaw and Hurtado 1987:4). And not all illness is perceived as being disease from an emic perspective. For example, a man returns to his rural home and months later his wife falls sick. A traditional healer, using divination, explains that the wife fell sick because the man angered the ancestors by taking a town-wife. From a traditional perspective the wife is ill, but she does not have a disease, hence she has no need of biomedicine but does need a traditional healer who can intercede on her and her husband's behalf with the ancestors. From a biomedical perspective, however, the man, perhaps, contracted HIV in town and infected his rural-wife. Biomedical health practitioners would all agree that multiple sexual partners increase the risk of a person contracting HIV. However, they would dismiss the traditional healer's dialogue with the ancestors. They would focus on the disease, HIV, and emphasize the biomedical instead. From the perspective, however, of traditional medicine with its emphasis on process, the traditional healer's personalistic diagnosis of the illness is viable. The ancestors were angry at the husband because he had broken with tradition and so the ancestors punished him by making his rural-wife ill. In fact, it may be far easier to change behavior by relying on the personalistic why of an illness (angering the ancestors by taking a town-wife) than by trying to introduce biomedical theories to populations that have minimal access to biomedicine and even less understanding of disease theory.

"African" Illnesses

The Namibian survey revealed that communication between traditional healers and biomedical health professionals was poor despite the fact that traditional medicine played an important role in maintaining community health and well-being (Lumpkin 1994). The vast majority of interviewed traditional healers and community members believed that modern health workers treated the symptoms but not the underlying causes of illness. From the perspective of social medicine and medical ecology (which explores the interrelationship between human beings' illnesses and their environment), this was entirely true because biomedicine did not focus on the process that led to illness but on eradicating disease. For example, biomedical personnel had no means to explain and rectify the personal, social, and cultural tensions that might lead a man to take a town-wife. And in Namibia, in order to protect patients' confidentiality, biomedical personnel were not legally allowed to inform a person that his or her partner was HIV-positive without permission being granted by the person who had tested positive. This permission was rarely granted. Women were put especially at risk by this. Most rural women could not deny a husband, who may have a town-wife or who may have visited prostitutes, his conjugal rights
without risking being tossed off the land. Also, polygyny was still acceptable in much of Namibia, and Namibian men were averse to using condoms. Thus, a woman had no means to insist that her husband be monogamous or that he use condoms when having sexual relations with her (or others). Namibian women knew they were in jeopardy, but reported that they were powerless to protect themselves from HIV. And biomedical health professionals reported feeling helpless because of the rule of patient confidentiality. Biomedicine could not address the process—the social aspects—of rising HIV infection, yet the only way to combat this disease is to address the process of infection. I believe that traditional healers could be particularly helpful with HIV/AIDS, not by just providing care for infected patients, not by merely relieving patients' HIV symptoms, but by addressing the social process of the illness and coming up with their own methods to combat increasing rates of infection.

Most indigenous healers and community members believed certain modern illnesses had to be treated by biomedical practitioners, whereas illnesses perceived by traditional healers and community members to be “African” had to be treated by traditional healers. African illnesses usually had a social/spiritual etiology, meaning that such illnesses occurred when persons violated taboos. A person who violated a taboo could cause illness in another person by coming into contact with that person—for example, by serving that person food or drink. Taboo violation was thus linked to contamination. Children were often contaminated by parents because they were in constant contact with them. Similarly, married persons or persons involved in sexual relationships often contaminated each other. Sexual intercourse provided a common point of contact for contamination. Many indigenous people classified African illnesses as sexually transmitted diseases that would not have been considered sexually transmitted according to biomedical etiology. For example, diarrhea in children and pulmonary tuberculosis were often categorized by indigenous persons and traditional healers as being sexually transmitted. If a person broke a sexual taboo and then came in contact with someone else and contaminated that person, the contaminated person was perceived as having been made ill by a sexually transmitted illness even if that illness was, according to etic, biomedical etiology, a disease such as pulmonary tuberculosis or diarrhea. Furthermore, violating taboos that protected nature (and so protected the people who depended upon nature for their sustenance) was also perceived as an act that could cause illness. Whole societies could become ill if they violated natural taboos.

Illness as defined by traditional healers was seen as being a process that resulted in lack of well-being; whereas, among biomedical professionals, illness was defined as being concrete—as disease. These two different ways of perceiving illness resulted in very different curative approaches. Traditional healers often used ritual (either as divination or as treatment) and herbs to reverse the process that had caused the illness to begin with. For example, a woman might give her husband tuberculosis (a sexually transmitted illness according to African illness etiology) because she had handled his food after having miscarried. The root of the illness was that process had gone awry: first she had miscarried, then she had broken a "sexual" taboo and handled her husband's food without first seeing the traditional healer for treatment, the result being that her husband came down with tuberculosis. The focus is not on transmitted pathogens, but on process gone awry and contamination of others. In order to reverse this process, the traditional healer usually relies upon some sort of ritual and perhaps herbs as well. Ritual deconstructs the process that caused the illnesses (miscarriage and tuberculosis) and then reconstructs and re-embodies a new more healthy process so there will be no more miscarriages and no more tuberculosis.
Biomedical medicine, on the other hand, attacks the object it perceives to dwell in the body—the disease, the other that does not belong there. The husband is treated for tuberculosis, a disease caused by an airborne pathogen. The wife is treated for the physiological cause of her miscarriage or, more likely, told to try to conceive again. Miscarriage and tuberculosis are not connected. Social and spiritual process are basically irrelevant.

**Illness in An Ecological Context**

Modernization and development tend to upset existing human systems and ecosystems, usually by reducing biocomplexity, cultural diversity, and perceptual diversity with severe health implications for all. For example, an act as simple as cutting down trees and leaving their stumps can provide a breeding ground that spawns a yellow fever outbreak (Garrett 1994:575). And my research among traditional healers in Namibia revealed that in all surveyed regions there was considerable concern about the effects of deforestation upon people's health. One indigenous healer mentioned that when a breeze blew off the Kavango River, people's health was generally poorer. A focus group in the same area said that ever since the trees along the river had been cut, the winds blew harder bringing illness. If someone investigated the ecological causes for increased illness when the winds blew, they might find less expensive ways to prevent these illnesses than just to treat them biomedically.

As previously mentioned, approximately 75% of all interviewed Namibian traditional healers were diviner-herbalists who believed that illness primarily had a personalistic etiology and secondarily a naturalistic etiology; however, some healers (particularly in areas where traditional spirituality had been usurped by Christian missionaries) believed illnesses only had a naturalistic etiology. These healers were usually herbalists who did not commune with the ancestors or spirits for fear that it would offend the Christian God and those who represented him. The naturalistic etiologies of herbalists who did not divine still retained an ecological context. If a healer believed a person became sick with yellow fever due to mosquitoes breeding in cut tree stumps, then it made sense to try and find a way to remedy this problem.

Examples of Namibian traditional healers placing health problems in an environmental context were numerous. As previously mentioned, deforestation was of great concern. Both traditional healers and community members reported that the ancestors were angry with people because they did not take care of their homelands (environment) and so were punishing people by sending illnesses to them. Here again we see society, environment, and health linked by people who were not privy to what is called the scientific method but who clearly were capable of empirical reasoning, which was further aided by transrational perceptual processes that helped them to view the world synergistically and holistically. They also explained that nature provided shelter, water, and food, and that people were in great danger now due to environmental deterioration. Healers in one region noted that they had to travel almost to the Angolan border to collect medicinal plants that used to be available locally. Rubbish was also considered a health hazard by traditional healers and community members, and it is interesting to note that rubbish was at the same time a public health concern because it provided breeding pools for malaria-carrying mosquitoes and other vector-borne diseases.
Some interviewed individuals volunteered that there were too many people for too few resources, thus, bringing up the issue of population pressure and environmental deterioration. When probed, almost all persons (traditional healers and community members) pointed out that population pressures were negatively affecting the environment and depleting resources. Most indigenous healers and community members cited that a growing population was leading to deforestation and to too little grazing land. At the same time, culture predicated that women should bear many children.

**Missionary Influence on Traditional Medicine**

Missionary influence in Namibia was particularly strong with 98% of the population considering themselves Christian. Nevertheless, belief in the spirit world and ancestors often co-existed side by side with Christianity. It should be noted that since Namibian independence and the lifting of the prohibition against traditional medicine, many churches had become more tolerant of traditional healers although, according to traditional healers and community members, there was a strong predisposition among churches to accept herbalist healers but to shun diviner-herbalists because the latter addressed the spiritual as well as physical aspects of illness and so competed with Christianity. Also, in Namibia (as in many other areas of Africa) Christian faith healers were on the increase. Faith healers maneuvered around Christianity's negative attitude toward divination by communicating directly with the sanctioned Christian God. Interestingly, this group of traditional healers was the least willing to collaborate with modern health practitioners because they believed that they were using the most powerful god and, therefore, found biomedicine entirely unnecessary. Ordinary traditional healers were much more likely to make referrals to clinics than were faith healers because they divided illnesses into two categories: African illnesses that they were excellent at treating themselves and modern illnesses that were best treated by biomedicine. Furthermore, although women made up 50% or more of ordinary traditional healers (both herbalists and diviner-herbalists), the emerging Christian faith healers were predominantly male and were usually found in cities rather than rural areas although their territory was expanding. Traditional women were, thus, losing one of the few prestigious community roles available to them.

**Communication Between Traditional Healers and Biomedically-Oriented Professionals**

For most Namibian traditional healers, the ecological context of health problems meant looking at how illnesses fit into the world of humans assuming a priori that humans related with each other, with the environment, and with the cosmos or spiritual realm. Indigenous practitioners' primary means of grasping this holistic picture was to use transrational perceptual processes such as divination, scrying, and dreaming, which were considered unscientific by most biomedical professionals.

In general, the UNICEF staff and Namibian Ministry of Health had little interest in the transrational perceptual processes used by the majority of traditional healers to diagnose and heal. Clearly, in the area of perceptual diversity and multiple consciousness constructs, ethnocentrism still prevailed. My experience indicated the cultural distance between traditional
health practitioners and Western-trained health professionals. According to Edward C. Green, a medical anthropologist, this is not uncommon:

For their part, African government officials tend to regard indigenous practitioners as a somewhat embarrassing anachronism, especially when dealing with donor organization officials or other outsiders. Traditional healers project an image of the backward, the primitive, the heathen, even of the illegal. It should be remembered that most colonial regimes supported medical missionary efforts to illegalize or severely curtail the practices of "witchdoctors." Today, Western-educated African elites would prefer to pretend that "witchdoctors" are a thing of the past rather than a genuine force to be reckoned with (1994:30)

The problem of bureaucracies, staffed by elites, having little understanding of the realities of the populations they serve is an old one. In 1976, medical anthropologist George Foster wrote:

The most successful medical and public health programs in developing countries require knowledge about the social, cultural, and psychological factors inherent in the innovating organizations and their professional personnel....Nevertheless, I am increasingly struck by the fact that many of the apparent resistances to acceptance of health services commonly attributed to villagers' apathy and their cultural barriers, are, in fact, the result of administrative and professional inadequacies. International health programs made significant strides when the importance of social, cultural and psychological factors in target group cultures was recognized. The next opportunity for comparable progress lies, first, in recognizing (or admitting) the limitations in present bureaucratic forms, and in many professional and individual assumptions found in all health programs; and second, in being willing to face up to these problems, even at the cost of professional discomfort (1978:303).

And he adds:

The underlying assumptions of medical personnel about their roles, responsibilities, and the structure of medical services sometimes constitute barriers to the development of health services best suited to the needs of developing countries (1978:309).

My fieldwork revealed that the primary drawback to collaboration between traditional healers and modern health practitioners was that African health professionals devalued indigenous health practitioners' use of polyphasic perceptual processes. It was less difficult for modern health workers to acknowledge the efficacy of herbal remedies and to acknowledge that traditional healers were good ethnopsychologists. But health professionals had a difficult time acknowledging the positive aspects of transrational modes used by traditional healers for diagnoses and treatment. Rituals used to induce transrational perception in either patient or healer were, at best, considered to be psychologically valuable. The notion that health professionals could actually learn from these processes was dismissed. Traditional healers responded to this summary dismissal of their talents by stating that modern health practitioners only treated the symptoms but not the causes of illness because they had no method or means to access the real cause of illness. Another way to express this would be to say that traditional healers treated health
problems in an ecological context, whereas biomedical health professionals treated health problems from a more limited model. Healers insisted that the transrational perceptual modes that they used for diagnoses and treatment were reliable. Informal interviews with community members also revealed that (as in the United States) even highly educated African professionals sometimes went to alternative (traditional) healers, often with positive results, when modern biomedicine did not work.

The fact is that even if modern health professionals believe there is only one reliable perceptual process for diagnosis and treatment (waking reality), real collaboration among biomedical health professionals and traditional healers will occur only if the modern health sector acknowledges the role of perceptual diversity in traditional medicine. Since Ministry of Health budgets are stretched tight in most of Africa and since traditional healers are the de facto healers in many rural areas, it makes sense for African health professionals to at least try to understand the different perceptual processes at work, particularly when biomedical healers have no evidence that intentional intuition and ritual do not help patients. Traditional healers were eager to learn as much about modern medicine as possible since they believed it would improve their healing skills. They were especially impressed by modern technology such as x-rays, blood transfusions, and sophisticated surgery. Modern health practitioners on the contrary seemed to feel that there was nothing for them to learn from traditional healers, although they were generally ignorant of how they worked or what they did.

Some traditional practices were harmful to client health such as using razor blades on more than one person, which could spread blood-borne diseases. However, interviewed healers who had been informed by public health personnel that their practice of reusing blades could spread diseases, including HIV, tried not to reuse blades. If they could not use a new blade on each patient, they, at least, washed the blades and let them dry before reusing them. Healers were likely to have been ineffective at treating sexually transmitted diseases (STDs), and since STDs can be a positive co-factor in contracting HIV (Green 1994:9-12), this may have exacerbated the possibility of HIV/AIDS infection. Furthermore, because traditional healers were repositories and protectors of traditional cultural and sexual mores, which were predominantly patriarchal, some were against contraception and empowerment of women to varying degrees. In general, however, male traditional healers were far more likely than their male peers to espouse empowerment of women. It also should be noted that many Christian churches were against contraception and against condom use, particularly among youth, even though condoms could prevent spread of HIV.

An Innovative Recommendation

Considering the rise in alcoholism, the rise in abandonment of women and children by men, and a rise in the abandonment of the elderly by their children—occurrences that have become synonymous with modernization and development, it is no wonder that healers and community members were concerned with rapid change. As modernization and development progressed, traditional healers took on the important psychosocial role of being change-brokers, helping people to adapt to situations that the healers themselves may initially have found baffling but that they had dealt with successfully. By being multivalent or able to use multiple modes of
perception, traditional healers showed themselves to be adaptable persons, and it is not a surprise that they made good change-brokers.

Because traditional healers were repositories of their culture's mores, particularly social and sexual mores, I suggested a novel intercultural communication process to the Ministry of Health and UNICEF. I proposed that a group of traditional healers gather together with a facilitator to explore issues of health, poverty, population, oppression of women, and environmental degradation in an attempt to come up with culturally-specific ways problems in these areas. The facilitator would be comfortable with shamanistic perceptual processes. Such a person would need to have had experiential education in intuitive processes and in the healing power of ritual, although that person need not be adept at those processes. More importantly, the facilitator would need to respect these processes and have strong intercultural communication skills so that information gathered from traditional healers then could be explained and disseminated to biomedical health professionals and administrators in a way that they could use to positively improve community health.

After meetings with the healers, the facilitator would request that the healers take the ideas born from these discussions back into their communities to discuss them community members and to explore these ideas through transrational perceptual processes with the ancestors. The facilitator would, thus, encourage healers to use the polyphasic perceptual processes that they are adept at using, rather than encouraging them to jettison these methods of accessing information in favor of science. After the proper length of time, the group would reconvene with the facilitator to discuss what they had learned.

In addition, this group of healers would meet as regularly as was realistically possible with local biomedical health professionals to discuss patients and compare diagnoses and treatment. The facilitator would attend these meetings and encourage improved communication between the two groups. Also, larger workshops would take place once or twice a year, bringing together particularly respected healers from different regions to meet with biomedical health professionals in order to improve collaboration between these two groups. One methodology that might be used successfully at these workshops among traditional healers and biomedical health professionals is the Florence R. Kluckhohn values orientation methodology.

This methodology was developed in the 1950s by Florence R. Kluckhohn (Kluckhohn and Strodtbeck 1961; Papajohn and Spiegel 1975). In 1951, using Florence Kluckhohn's value orientation theory and Fred L. Strodtbeck's statistical knowledge and skills, the Group for the Advancement of Psychiatry at Harvard, a group of psychiatrists interested in family therapy, set out to prove Kluckhohn's theory that:

Value orientations are complex but definitely patterned (rank ordered) principles, resulting from the transactional interplay of three analytically distinguishable elements of the evaluative process—the cognitive, the affective, and the directive elements—which give order and direction to the ever-flowing stream of human acts and thoughts as these relate to the solution of 'common human' problems (Kluckhohn and Strodtbeck 1961:4).
The study was part of a larger Harvard project called the Harvard University Laboratory of Social Relations. The researchers mapped the value orientations of four groups in the Rimrock area of northern New Mexico: (1) Hispanics, (2) Navajo, (3) Zuni, (4) Texans, and (5) Mormons. This same methodology, in revised form, is now used by the Florence R. Kluckhohn Center, based in Bellingham, WA. The organization's executive director, Kurt Russo, has conducted value orientations research both in the United States and abroad. He believes that value orientations are a fundamental aspect of culture that are all too often overlooked. Using interviews, questionnaires, and computer mapping techniques, the Kluckhohn methodology maps out value differences between cultures. These psychometric paradigms are used to help different cultural groups understand how their perceptual reality-constructs differ and how they misperceive the constructs of other cultures. This subsequently offers a point of departure for improving dialogue and reaching conflict resolution.

The criteria used to establish value orientation in this methodology are: (1) preferred mode of activity i.e. being, being-in-becoming, or doing, (2) preferred social relational orientation i.e. lineal, collateral, or individualistic, (3) preferred time orientation i.e. past, present, or future, (4) preferred human-nature orientation i.e. subjugation-to-nature, harmony-with-nature, or mastery-over-nature, and (5) general opinion of human nature i.e. evil, neutral—a mixture of good and evil, or good (Kluckhohn and Strodtbeck 1961; Papajohn and Spiegel 1975; Russo 1992; Russo and Zubalik 1989). The methodology promotes an awareness that other perceptual modes exist—a concept to which many people have never been exposed. It would obviously be a useful tool to promote understanding between groups such as traditional healers and biomedical professionals in Namibia. However, I also envisage this methodology as a teaching/training tool (in workshop format) to introduce development organizations to the value of transrational perceptual modes in general. Obviously, this methodology could be used for almost any issue that affects local communities, not just health issues.

The Therapist-Spiritist Project in Puerto Rico

Anthropologist and psychiatry professor, Joan Koss-Chioino, organized and co-managed the Therapist-Spiritist Project in Puerto Rico from July 1976 to June 1980. The main goal of the project was to create a bridge between espiritismo, or spiritism, which is the traditional healing system found in Puerto Rico, and biomedical health professionals, particularly in the area of mental healthcare (Koss-Chioino 1992:7). The project brought mental health workers, doctors, and spiritists together to discuss treatment of women who presented themselves as patients. Groups of spiritists and health professionals met six hours per week in a seminar for three ten-month academic years in three different areas that were all part of the western (largest) health region in Puerto Rico. Three additional six-month programs were presented in each of the three different areas and included medical residents, some of their attending physicians, mental health professionals, and spiritists (Koss-Chioino 1992:9). The project was based on a similar goal to my 1994 recommendation for traditional healers and biomedical health professionals in Namibia, that of establishing meaningful exchange between healers and health professionals in an effort to promote collaboration and improve community healthcare. The project in Puerto Rico was successful, showing that such collaboration is attainable.
As with most shamans found worldwide, the majority of Puerto Rican spiritists (or mediums) first suffer from a serious initiatory illness before becoming a healer. Having become a healer, they alter their state of consciousness at will to diagnose and heal patients during ritual healing sessions. Using “possession-trance” as their primary altered state of consciousness, they lend their bodies to the spirits allowing the spirits to speak through them to their clients (Koss-Chioino 1992:38-39).

Koss-Chioino points out an inner healer (or mechanism) can relieve physical and mental pain. Spiritists’ patients access that inner healer through dialogue with spirits, through developing their own spiritist capabilities, and by restructuring their self, which, in turn, affects their illness.

We opined that ritual healing techniques in Spiritism can be viewed physiologically as ways to mobilize endogenous processes within the central nervous systems of clients. They may also be viewed from an experiential perspective as a special variant of the therapeutic relationship, a ritual encounter through which a distressed person in a highly suggestible state can feel a sense of instant intimacy with another being through the sharing of pain and distress. The healer, though action and appearance, is perceived (also apperceived) as manifesting great love and concern. This perspective on the Spiritist healing encounter agrees with that of the Espiritistas themselves. They rarely emphasized the “material” causes of the illnesses they saw, although they did employ remedies aimed at physically manipulating the body (Koss-Chioino 1992:65).

Furthermore, clinical symptoms are affected by the patient’s cultural view of healing and social representation of the body (Farr 1981). Spiritism sees illness as being caused by spirits, but embodied by the patient; thus, illness is transpersonal in nature (Koss-Chioino 1992:173-196). Distress is embodied, and it is the role of the healer to help the patient deal with stressful interpersonal relationships and life situations so as to heal the illness.

We noted that because Spiritists are able to look at cases of mental illness from a multidimensional perspective, their interpretation of the somatic leads to a more meaning-centered treatment approach, one that considers complaints as metaphors, especially if expressed by people who otherwise are unable to communicate about certain types of distress. In our view, the Spiritists were not referring to the disturbances and abnormalities of the cognition of mentally ill people but to the fact that their situations can limit their openness of expression about conflicts with relatives and even about their inner, personal distress. Spiritists point to the possibility that in these cases the complaints themselves are both evocative and communicative (Koss-Chioino 1992:187).

Biomedical doctors look for physiological causes for illness. Mental health professionals tend to treat patients with drugs to alter their affective states and to treat them with a limited amount of psychotherapy. The latter rarely includes the entire family and even more rarely acknowledges cultural influences upon a patient’s illness. But the primary role of an effective healer actually is to help the patient find meaning in his or her suffering, which can alleviate the suffering itself or, at least, help the patient find a new, more palatable, relationship with that suffering (Koss-Chioino 1992:198). As Koss-Chioino explains, healing reconstitutes the self in particular ways (1992:200). The Therapist-Spiritist Project is an example of how acknowledging the different perceptual processes spiritists, mental health workers, and doctors use for healing enhances the
healing capacity and knowledge of all three groups. In addition, collaboration between the three groups benefits the patient who can be referred to the appropriate type of healer at the appropriate time, which improves the likelihood of a positive healing outcome.

Conclusion: Global Survival and Perceptual Diversity

Is polyphasic consciousness necessary for global survival? Perceptual diversity allows human beings to access knowledge through a variety of perceptual processes, rather than merely through everyday, waking reality. Many of these perceptual processes are transrational (meditation, trance, dreams, imagination) and are not considered by science (which is based primarily upon quantification, reductionism, and the experimental method) to be valid. In the past, perceptual diversity was valued by a majority of cultures. Now it is being devalued and replaced by the monophasic culture of “developed” nations. Just as we are losing (1) biodiversity (or biocomplexity) in the environment and (2) cultural diversity among societies, we also are losing (3) perceptual diversity among human cognitive processes. All three losses of diversity (bio, cultural, and cognitive) are inter-related.

Individuals and cultures create cognitive maps to help them navigate the landscape of socio-cultural and physical environments (Lazlo and Krippner 1998:66). These cognitive maps are used by individuals and cultures to adapt and evolve. The cognitive map of “developed” nations is one of specialization that disavows multiple perceptual processes, whereas the cognitive maps of most “less developed” cultures are more holistic, providing for a multitude of processes with which to access knowledge, including altered states of consciousness.

When societies devalue and lose perceptual diversity, they lose varied ways of accessing knowledge. The loss of perceptual diversity homogenizes societies, reducing cultural diversity. And the loss of cognitive maps that use a variety of perceptual processes, including altered states of consciousness, results in navigation of physical environments based only upon monophasic consciousness. When humans interact with the environment using only monophasic consciousness (or the scientific method), the end result is that they reduce biodiversity and biocomplexity. For example, an obvious result of the monophasic perspective is the creation of agricultural monoculture that has allowed the United States to produce a large amount of agriculture for domestic use and foreign export. At the same time, monoculture has reduced top soil dramatically and is very much at risk from disease and pests precisely because it is all the same. Now there is concern about the loss of plant and seed species that were previously available and which for many years had fed the human species.

I do not advocate that we jettison the scientific method. It is an extremely valuable tool. What I do advocate, however, is that we acknowledge that the scientific method is one tool among many available for accessing knowledge. In addition, I propose that altered states of consciousness, such as meditation, dreaming, trance, divination, imagining, etc., may be quite useful in accessing information within the larger system of consciousness, because they do not break the system down but address it as a whole.

From the perspective of an anthropologist who has worked with development organizations, development will continue to destroy perceptual diversity because it exports the dominant cognitive process of “developed” nations: monophasic consciousness. Monophasic
consciousness, most often embodied as the scientific method, disavows the validity of any knowledge accessed through transrational processes. Perceptual diversity is important for evolutionary competence and human adaptability. Already, without it, the monophasic consciousness of Western, developed nations has led to loss of cultural diversity and biodiversity. Without perceptual diversity, the future survival of the human species and environment is seriously at risk.
References Cited

Akerele, Olayiwola

Aldridge, David

Bateson, Gregory

Bourguignon, Erika E., ed.

Castillo, Richard J.

Chambers, Robert

Dale, Reginald

Desjarlais, Robert R.

Drummond, Lee

Farr, Robert M.

Fischer, Roland

Foster, George M.

Foucault, Michel, ed.
Garrett, Laurie  
Green, Edward C.  
Grof, Christina, and Stanislav Grof  
Haq, Mahbub ul, ed.  
Katz, Richard  
Kluckhohn, Florence Rockwood, and Fred L. Strodtbeck  
Knickerbocker, Brad  
Koss-Chioino, Joan  
Laughlin, Charles  
Laughlin, Charles, and John McManus  
Laughlin, Charles, John McManus, and Eugene G. d'Aquili  
Lazlo, Alexander , and Stanley Krippner  
LeVine, Robert A.  
Ludwig, Arnold  
Lumpkin, Tara Waters
Maren, Michael
Murphy, Raymond
Papajohn, John, and John Spiegel
Prunier, Gerard
Repetto, Robert
Russo, Kurt, ed.
Russo, Kurt, and Steven Zubalik
Scrimshaw, Susan C.M., and Elena Hurtado
Shiva, Vandana
Taylor, Eugene
Turner, Victor
Van Gennep, Arnold
Venkateswaran, Sandhya
Walsh, Roger
1993    The Transpersonal Movement: A History and State of the Art. Journal of
         Transpersonal Psychology 25(2):123-139.
Waring, Marilyn
Wilcox, Bruce A., and Kristin N. Duin
1995    Indigenous Cultural and Biological Diversity: Overlapping Values of Latin
         MA.