

# Trances That Heal: Rites, Rituals and Brain Chemicals

By: Carol Laderman

Professor Carol Laderman received her Ph.D. in Anthropology, awarded with Distinction, from Columbia University, and has taught at Fordham and is Chair of the Anthropology Department at City College in New York. Professor Laderman's primary research interests are Southeast Asia, medical anthropology, nutrition, reproduction, and sex roles. Her publications include such volumes as:

*Wives and Midwives: Childbirth and Nutrition in Rural Malaysia* (University of California Press, 1983)

*Taming the Wind of Desire: Psychology, Medicine and Aesthetics in Malay Shamanistic Performance* (University of California Press, 1991)

*The Performance of Healing* (Routledge, 1996)

Professor Laderman is also the wife of Gabriel Laderman, bookseller. They are currently planning a second, extended trip to Malaysia, to update Professor Laderman's research on Malaysian trances and healing rituals.

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**Carol Laderman** didn't go to Malaysia in search of shamans; she went to study childbirth practices in an area in which shamanism had died out 75 years earlier-or so it was assumed. Once she got there, she found these healers were still an integral part of the village medical system. An their ceremonies helped her discover "the things the Malays take for granted that everyone knows—that an embryo begins life in the man's brain, for instance."

Laderman has also researched teenage pregnancy and nutrition in New York's Spanish Harlem and South Bronx. She applied the latest research in brain chemistry to trance states in her article, which follows.

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Pak Long Awang is a powerful healer. The Malay villagers he treats believe that he commands spirits and can enter into an altered state at will, becoming a vessel for pronouncements from the invisible world. I first witnessed his power at work while doing anthropological research in a small Malaysian village set between the South China Sea and a tropical rain forest, a village so isolated it lacked electricity. In order to conduct my research, I had to store vials of blood samples in a thermos bottle packed with ice until they could be flown out to the capital, Kuala Lumpur, 180 miles away.

Here, against a backdrop of flickering oil lamps in an atmosphere redolent of a resin used as

incense, Pak Long serves as the local version of a country doctor. He treats aches and pains that he diagnoses as "wind sickness" by inducing a deep trance the Malays call "forgetfulness".

Pak Long is a shaman, or spiritual healer, and though his methods seem bizarre, his healing trances may work their apparent magic by actually altering the levels of brain endorphins---the body's natural opiates---in his patients. These endorphins, produced by every human in response to certain extreme situations, may be a link between the trance ceremonies of the East Indies and the most sophisticated neurochemistry laboratories in the West.

For almost two years after my arrival in the village, I refused to undergo one of the shaman's trances. Having become a member of Pak Long's entourage, I attended healing ceremonies with growing regularity; the shaman had even adopted me as his own daughter. Still, as a Westerner and a scientist, I was afraid to enter trance---afraid I might embarrass myself or, worse, never come out at all. My reluctance became a standing joke among the villagers. Although I had learned to love and trust Pak Long, I remained unwilling to place myself under his control. I had asked him and his patients many times to describe their sensations during trance, but no one would. "How could I tell you what red looks like if you had never seen the color?" Pak Long asked.

Still, I had already become a willing subject for some of Pak Long's treatments. I regularly submitted to incantations of release to ward off the dangers the Malays thought accompanied my work on Malay childbirth. I had apprenticed myself to the village midwife, who taught me obstetrics, nursing and the ritual duties of her profession. Malays believe that human birth is too deep a mystery for any but a midwife to witness, and even she runs the risk of failing eyesight unless she is ritually released. Usually the midwife performed this ritual for both of us, but occasionally Pak Long would squeeze it in at the end of one of his more elaborate healing ceremonies. Unknown to me, the stage was set for my first trance.

One day, instead of beginning the familiar words of release as I sat beside him on the pandanus mat recently vacated by a cured patient, Pak Long signaled the assembled musicians to start the music that accompanies the transition to "forgetfulness." As the drums and gongs set up their steady rhythm, Pak Daud, the shaman's partner, played the introduction to "The Song of the Young Demigod," a story of frustrated love, on his spike fiddle. Pak Daud is the indispensable earthbound member of the shamanistic team; he does not enter into a state of changed reality.

For a moment I hesitated, and then decided to submit to trance. As the vibrations of the drums and gongs entered my body, my eyes seemed to glaze over. As the music became louder my mouth opened, trembling uncontrollably. I began to feel cold winds blowing inside my chest, winds that increased in intensity, as the music swelled and accelerated until it felt as if a hurricane was raging within my heart. I put my hands on my chest to try to calm it, but instead I began to move my shoulders and then the whole upper part of my body as if I were about to get up and dance. With the last vestiges of my self-control, I prevented myself; I still feared embarrassment. But as the music swelled to a climax, I began to move my head so quickly and violently that, had I not been in trance, my neck would undoubtedly have snapped.

The music stopped abruptly. Instantly, I stopped shaking my head and sank to the floor. Pak Long began reciting spells to bring me out of trance. I came out very quickly, literally as though a spell had been broken. I felt good; the only aftereffect was a slight pain in my stomach. Women crowded around me to wash my face with jasmine water and massage my stomach. The whole thing had taken about 20 minutes.

What was going on?

According to these Malays, the universe and all of its creatures contain four basic elements: earth, air, fire and water. When one of these elements is thrown out of kilter, sickness can result. The talents and desires of individuals are classified as air, or "inner winds." They are powerful when expressed, but when denied or thwarted, they become dangerous, causing "wind sickness." The shaman's cures release these pent-up winds.

Most Western scientists have a different perspective on the trance experience. Trance is achieved through cultural cues: ritual props, incantations, songs and stories. Percussive music, a steady, musical pulse, is especially important in the transition to altered states in cultures throughout the world. The most effective rhythm is four beats per second, which is exactly the optimum frequency for pain relief through electrically stimulated acupuncture. What's more, it matches the EEG frequency of theta waves, which are produced by the brain during periods of deep meditation but appear only rarely in a normal waking state. English faith healers have been shown to produce continuous theta waves in their patients by the laying-on of hands, and the patient's theta waves exactly match the pattern of the faith healer's.

A more important key may be found in the biochemistry of endorphins. Endorphins (the name is a contraction of "endogenous morphine like substances") are substances that act on the nervous system, and are generated in the human brain in response to pain, stress or certain kinds of "peak experience." It may be that they are also generated in response to a belief.

The ability of the body to heal in response to belief has long been recognized. Physicians regularly administer placebos, pharmacologically inert substances, in circumstances that don't indicate an active medication. The patient believes he has been given effective medication and, in response to this belief, he recovers. One theory is that his body produces chemicals—perhaps endorphins—that alleviate his ailments. Placebos have been used to control postoperative pain, relieve anxiety, and to cure warts and peptic ulcers.

Endorphins may have evolved in order to protect and preserve our species in its struggle for survival. Pain normally serves as a signal to alert the body that something is amiss. But when pain becomes excessive or too prolonged, it becomes destructive; neurohormones can take over to relieve the pain, sometimes even producing feelings of euphoria. In pregnant women, for instance, endorphin production increases during the last trimester and reaches a peak late in labor. This helps account for the pleasure with which some women remember natural childbirth; endorphins have reduced both the pain and the memory of it.

Nor are endorphins the only chemicals the brain produces. Given the right cues, it will generate

tranquilizers as effective as Librium or Valium. A growing number of scientists, from biochemists and pharmacologists to psychiatrists, psychologists and anthropologists, have speculated that somehow shamans like Pak Long have hit on ingenious methods for turning on production of the brain's natural chemicals. This involves a subtle appreciation of the patient's psychological, as well as his physical, problems.

The shaman carefully tailors his treatment to the patient's needs, and his goal is to choose the appropriate "song of transition" that will move the patient into a trance state. For an asthmatic retired puppeteer, for example, Pak Long chanted his incantations to the accompaniment of musicians playing the overture to the shadow-puppet play.

For the yearly healing of the fattest woman in the neighborhood, known affectionately as "Miss Fatty," Pak Long took another tack. Miss Fatty had an overwhelming desire to dance in the Malay opera, a desire doomed by her enormous girth. She functioned well as wife and businesswoman for most of the year, but as her frustration, or retained wind, built up, she would lose her will and energy and take to her bed. In the healing session, Pak Long and his assistants played the music of the Malay opera to assist Miss Fatty's journey from the normal world to the ideal; there she could realize her ambition. In trance, she would rise from her sleeping mat with the grace of a lithe young girl and dance the role of the beautiful princess before a delighted audience of friends and neighbors. Afterward, her ailments disappeared.

The most striking aspect of the shamans' trances is that they work—sometimes when Western medicine fails. One day, Pak Long was stricken with intense chest pain. I drove him to the hospital, but the resident physician could discover no physical cause for the symptoms and sent us home.

When we got there, Pak Long was placed, pale and trembling, on his sleeping mat. A consulting shaman, summoned for a healing ritual, discovered by divination a cause that would make little sense to Western doctors: Angry, unsatisfied spirits were squeezing the life from Pak Long's heart and lungs. Several weeks earlier, Pak Long had treated a woman for a spirit-induced disease. The spirits, using the shaman's voice, agreed to restore her health in return for a feast. A chicken, eggs, pancakes, custard, rice, cigarettes and a present of white cloth were to be ceremoniously laid out for them near the jungle. But the patient's husband, a rich, urbanized Malay, was skeptical of traditional methods. Instead of fulfilling his promise to the spirits, he took his wife to a clinic in Kuala Trengganu, where she recovered. The couple credited the doctor, and invited neither Pak Long nor the spirits to the feast of thanksgiving. The spirits, insulted and confused, turned on Pak Long.

The consulting shaman announced this to me and to the waiting villagers, and asked that we all join him in calling out to the spirits to leave the shaman alone and attack the real culprits, the unbelieving couple. Immediately Pak Long stopped trembling, color flooded into his face, and he sat up and smiled.

There was clearly no hoax involved here; the consulting shaman believed completely in the results of his divination. But was Pak Long merely responding to the power of suggestion? A

Western-trained doctor might have diagnosed his condition as angina pectoris or esophageal spasm; both are often associated with emotional stress. Was his pain brought on by the public denigration of his powers and relieved by a public expression of support?

### **The Mind-Body Connection**

The Western interpretation of the shaman's power lies in the growing appreciation of the mind-body connection. Psychosomatic illnesses may have their origins in the mind. But once physical symptoms appear, they are quite real and not "all in the mind." We are discovering that the biochemical changes the mind produces can ravage the body just as a virus or a drug can. In fact, Dr. Raymond Prince of McGill University, a pioneer in the field of transcultural psychiatry, has gone so far as to say that psychiatrists who don't recognize the interaction of mind and body should be known as "former psychiatrists." Malay shamans, it seems, have always inhabited the frontier that Western scientists are just beginning to explore. And they have had company.

There is good evidence to suggest that cultures and cults around the world have long exploited the brain-body link to produce altered states of consciousness without using drugs. The Salish Indians of Canada hold a Winter Spirit Dance designed to help a man achieve the kind of visionary experience that brings power in the form of a tutelary spirit. But the dance is also used to treat "spirit illness," a condition characterized by depression and often connected with drug and alcohol abuse.

The Salish use a number of techniques, from over stimulation to sensory deprivation, to produce the altered state. The patient is alternately immobilized in darkness and silence and forced to run and dance for hours to the beat of drums, rattles and chants. He is underfed and tantalized with food, overheated with heavy blankets and nearly drowned in icy water. The treatment ends only when he becomes a new "baby" and calls out a song that has been revealed to him by the spirits. One can compare the Winter Spirit Dance to experiences brought on by opiates, and the Salish recommend it for tribesmen who have become dependent on drugs. Are the tribesmen substituting natural brain-produced opiates for externally administered drugs?

Dr. Sheila Womack, an anthropologist who has researched Pentecostal Church services in the United States, feels that such a substitution may explain the ability of alcoholics and drug addicts to give up their habits in favor of regular churchgoing as vessels of the Holy Spirit; they speak in tongues and temporarily leave the confines of everyday life. What is even more remarkable is that if they don't go to church at least three times a week, they suffer withdrawal symptoms.

### **Missing Link**

Unfortunately, objective proof of a link between ecstatic states and endorphins is difficult to obtain. Lumbar punctures, standard procedure in neurology clinics to obtain spinal fluid for chemical analysis, are too risky in the field. My make-sift blood-refrigeration methods are inadequate for preserving the blood samples until laboratory analysis can detect the unstable chemicals. An even if these problems were solved, we don't really know exactly which chemicals are likely to be the most significant in a shaman's cures. We could block endorphin

production with naloxone, a morphine antagonist that also interferes with the action of endorphins. But if the experiment were a success and a patient failed to achieve trance, then the healing ritual would be a failure, and a traumatic one at that.

Such questions may already be academic; at least as far as the Malay shaman is concerned. For years, shamans have practiced in defiance of the ruling Islamic religious authorities. When I returned to my east coast village last summer, Pak Long had retired. Pat Daud, his partner, had suffered a stroke, and Tok Mamar, the consulting shaman, had given up shamanic activities after his pilgrimage to Mecca.

Sadly, we may never discover the exact biochemical components of the shaman's cures, but there is no doubt that by opening the floodgates of emotion he can exorcise the demons of disease.

### **Shamanism in Print**

*Ecstatic Religion* by I.M. Lewis. New York: Penguin, 1971.

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*Shamanic Voices: A Survey of Visionary Narratives* Edited by Joan Halifax. New York: Dutton, 1979.

*Shamanism: Archaic Techniques of Ecstasy* By Mircea Eliade. Princeton: Princeton University Press, 1964.

*The Way of the Shaman: A Guide to Power and Healing* By Michael J. Harner. New York: Harper & Row, 1980.

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