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“The Effectiveness of Symbols” Revisited: Ayoreo Curing Songs

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Lévi-Strauss’s well-known paper “The Effectiveness of Symbols,” originally published in 1949, is still used as a basic text for teaching the anthropology of health and illness (Lévi-Strauss 1963:186–205). Indeed, I would argue that since the paper was written there has been little advance in addressing the two fundamental issues that Lévi-Strauss raises: firstly, whether shamanistic curing techniques are in fact effective and, secondly, if they are, how they achieve their ends.¹

These are questions that anthropology has to address with as much honesty as possible. I also believe anthropologists should try to generate insights into the nature of what, for want of a better term, can be described as “Western” or “scientific” modes of thought. Following the approach taken in Joanna Overing’s *Reason and Morality*, the intention of this paper is to test the limits of socially constructed reality, using a discussion of indigenous curing to try to elucidate some of the assumptions that underlie our own ideas about health and illness (Overing 1985:1–25). The paper will examine some of the concepts that underlie the use of the curing songs, or *sarode*, one of the healing techniques used by the Ayoreo, an indigenous people of the Gran Chaco, in order to compare Ayoreo and Western understandings of the world and the way these understandings inform experiences of health and illness. My intention is to explore and perhaps encourage a dialogue between different systems of thought, or, to express it more accurately, between different ways of understanding the world.

At this point I ought to make it clear that in my own experience I have never found any evidence to justify a distinction between Western and non-Western modes of thought. For instance, I find Lévi-Strauss’ opposition of mythic and scientific modes of thought—as expressed in the metaphor of the *bricoleur* and the engineer—utterly misleading (Lévi-Strauss 1966:15–32). There is no difference whatsoever between the powers of observation and deduction of “indigenous peoples” and “scientists.” Indeed, it is

unlikely that peoples such as the Ayoreo would have been able to survive in the harsh, arid environment of the Gran Chaco if they had not acquired a detailed, scientific knowledge of their environment, a knowledge that often surpasses that of professional botanists and zoologists (Schmeda Hirschmann 2003). If there are any differences between Western and indigenous ways of understanding the world, I believe they have more to do with the way information is shared and communicated—particularly through the use of widespread literacy and other technologies for storing and disseminating information—than with the differences in the way people actually think.

The social construction of health and illness is a serious, real world issue. In all the countries I have worked in—including Paraguay, Bolivia, and more recently Guyana, people suffer and often die for want of very simple interventions of a kind that are commonplace in the “developed” world. Women die in childbirth, more frequently in indigenous societies than in populations that have access to good prenatal care and recourse to surgery in case of complications. Most indigenous societies are characterized by high levels of infant mortality, due to respiratory infections, diarrhea and infectious diseases such as measles. Likewise, much adult mortality is caused by tuberculosis, malaria, Chagas’ disease and, increasingly, by AIDS. Let me make it clear that my program is not one of logical or moral relativism. I do not believe that “indigenous peoples” should make do with one system and “the West” with another. Rather, I believe indigenous societies and the West have much to learn from one another, providing each can respect and acknowledge the achievements of the other. It is common knowledge that many of the drugs used in Western medicine are derived from products originally used by indigenous peoples, and the pharmaceutical companies that dominate the market for Western drugs take indigenous botanical knowledge sufficiently seriously to invest large sums of money in identifying the plants used in indigenous medicine.

At the same time, it must be acknowledged that Western medicine has had a significant impact on the lives of indigenous peoples. In Paraguay, for example, in spite of the appalling deficiencies in the public health services, Western medicine has had a positive impact on the health status of the country’s indigenous peoples. The two most dramatic achievements have been the simplest. The vaccination campaigns that have been carried out since the mid-1970s have changed the demographic status of Paraguay’s indigenous peoples from one of declining population to high growth, while the widespread use of oral rehydration therapy (ORT), which is little more than a mixture of salt and water, has significantly reduced infant deaths from diarrhea and dehydration. In the 1970s it seemed likely that societies

such as the Aché might die out, as Darcy Ribeiro previously documented for many indigenous societies in Brazil (Ribeiro 1970:48–62). Even as recently as 1992, I visited some Mbya-Guaraní communities in the Cordillera de San Rafael in Eastern Paraguay that had refused to accept vaccinations and had lost all their children to an epidemic of measles. By the late 1970s, however, the demographic situation of most indigenous communities had turned around, and the censuses carried out in 1981, 1992 and 2002 have shown a consistent, steady growth in Paraguay's indigenous population (INDI 1982; DGEEC 1997; DGEEC 2002).

Returning to the issues raised by Lévi-Strauss—if we agree that the curing techniques such as the Cuna shaman's song he describes in his essay are effective—we then have to consider how the cure is achieved. Lévi-Strauss' response is to suggest that the Cuna shaman's song is situated "on the borderline between contemporary physical medicine and such psychological therapies as psychoanalysis" (1963:198). In a typical example of his dialectical approach, Lévi-Strauss suggests that the healing song is an inversion of psychoanalysis: "in the case of the schizophrenic, the healer performs the actions and the patient produces his myth; in the shamanistic cure the healer supplies the myth and the patient performs the actions" (Lévi-Strauss 1963:201). It is here that the argument seems a bit dated, since it was written in the days when psychoanalysis still enjoyed more of the status of a science, that is, before the critiques of *Psychiatry and Anti-psychiatry* (Cooper 1967), *The Divided Self* (Laing 1965), and *The Myth of Mental Illness* (Szasz 1972) were published. I believe for most contemporary anthropologists, psychoanalysis has a much more ambiguous status than it enjoyed at the time Lévi-Strauss wrote his essay. Modern anthropological studies are less willing to accept Freudian or other psychoanalytical notions of the unconscious as having any more explanatory value than native ideas of personhood.

The demise of psychoanalysis not only as a basis for anthropological explanation, but also perhaps in the wider context of Western medical practice, is an issue that merits further comment. For the time being, I would simply like to note that while "mental illness" is recognized as a significant concern in "developed" and what are misleadingly described as "developing" countries, it receives low priority for public funding or other support, and I would argue that this has less to do with the validity or scientific merit of psychoanalysis than with the economic rationality that drives Western medical practice. First, however, I want to turn to the Ayoreo.

AYOREO CURING SONGS

The Ayoreo are an indigenous people of the Gran Chaco who live on both sides of the border that divides Paraguay and Bolivia. They speak a language belonging to the Zamuco linguistic family. Indeed, Ayoreo is very similar to the Zamuco language described by the eighteenth-century Jesuit linguist, Father Ignacio Chomé (Lussagnet 1963). The only other contemporary peoples who speak languages belonging to this linguistic family are the Ebitoso and Tomaraha, usually referred to in the ethnographic literature as the Chamacoco.²

In all, the Ayoreo number 4,000–5,000 people, with over 2,000 living in Paraguay. The 2002 Paraguayan Indigenous Census enumerated 2,016 Ayoreo in Paraguay (DGEEC 2002:234). Until the 1950s, the Ayoreo avoided contact with the national societies or other indigenous peoples. Relations between different Ayoreo territorial groups were often hostile, especially between the northern and southern Ayoreo—the Guidaigosode and the Direquedejnaigosode, to use the terms current among the Paraguayan Ayoreo. Even today the Ayoreo are remarkably distinctive as a people: they maintain their language and much of their culture; many speak little or no Spanish or Guaraní; and, unlike many other indigenous peoples in the Chaco, they rarely if ever intermarry with people from other indigenous societies, let alone nonindigenous peoples.

In Bolivia, the Ayoreo were first contacted by Protestant missionaries from the New Tribes Mission in the 1950s, and settled on the missions of Tobité and Zapocó. In Paraguay, the Ayoreo were contacted by Salesian missionaries in 1962. One group was taken to the Colonia María Auxiliadora, while the other went back into the Chaco and in 1968 was recontacted by the missionaries from the New Tribes Mission, who settled them first in Cerro León, then in Faro Moro, and finally, in 1978, in Campo Loro. The last few families of the Totobiegosode were contacted as recently as 2003, after various attempts, including a disastrous expedition in 1986 that led to the deaths of five of the Ayoreo from Campo Loro. Since the 1970s the Paraguayan Ayoreo have been working as laborers—in the Mennonite Colonies in the Central Chaco, cutting firewood, fence posts, and *palo santo*—or working on Mennonite ranches. In recent years a number of smaller, independent communities, such as Tunucujai, Ebetogue, Jesudi, and Jogasui, have split off from the two main communities in Paraguay and have acquired rights to their own small areas of land.

Most of my rather limited work among the Ayoreo took place in 1977, when I was a young graduate student carrying out research for my doctoral thesis. After much difficulty, the Bishop of the Alto Paraguay eventually

gave me permission to work in the Salesian mission of María Auxiliadora. I was lodged in the mission guest house and devoted much of my time to taping and transcribing Ayoreo mythology with an interpreter, Santiago Pucheraí, and with Lázaro, one of the oldest and most knowledgeable men in the community, an impressive figure with a large crescent scar burned into his chest. At some point—perhaps when I was beginning to overcome the suspicions that my presence aroused, since both the Catholic and Protestant missionaries had made every effort to convince the Ayoreo that the *abujade*, anthropologists and suchlike, were communists—Santiago suggested that I might be interested in taping some of the *sarode* or curing songs. My interest at the time was more in the language than anything else. Before leaving for Paraguay I had read all the available ethnographic material on the Ayoreo, but by the time I arrived in "the field" I had little idea of where to focus my attention or what questions to ask. My main concern was simply to learn the language. I was hampered as much by my ignorance of the natural environment—of the seasons, the ecotypes, the fauna and flora of the Chaco—as by the language. I found transcription a useful, but not very satisfying, exercise that complemented my efforts to learn the language. The content of the myths themselves seemed so exotic, even absurd, that my basic premises were never really challenged, and I accepted the notion that the myths were just stories, intended perhaps more as entertainment than as a way of explaining the world. Indeed, my understanding was similar to that described by Joanna Overing, who early in her fieldwork made the mistake of asking a Piaroa shaman for another story about the creation, explaining that a "story" need not necessarily be true (Overing 1985:161 footnote 22). If I remember rightly, after hearing and transcribing one or two songs, I may have suggested or asked for other songs to cure specific conditions. In some cases Lázaro obliged, while in others I was informed that the song was "too dangerous" and that if it was sung without good reason it would actually bring about the condition it was intended to cure. For instance, I never recorded a song to cure snakebite, since I was informed that if it were sung it might actually cause someone in the community to be bitten by a snake.

The general features of Ayoreo curing songs have been described in the ethnographic literature, particularly in Lucien Sebag's article on Ayoreo shamanism, which gives examples of *sarode* to cure toothache, pain in the legs, convulsions, exhaustion, wounds caused by a jaguar, and so on (Sebag 1965:96–101; see also Bórmida and Califano 1978:161–2). The logic and the general structure of the songs described by Sebag are the same as those I recorded, although the details of the particular animals and plants that have the power to cure are usually different.

It is important to note that the *sarode* are only one of a variety of different curing techniques. They can be used by anyone who knows the songs, not just people regarded as shamans. However, because of the potential danger associated with the songs, they are not that widely known and in fact seers or shamans usually have a larger repertoire. Ayoreo shamans also use other techniques, especially sucking, to remove the pain or the pathogenic objects believed to cause illness, and some shamans are specialized in blowing or a technique that involves passing their hands across the parts of the body affected by illness. Sebag explains this as the *oregaté* (the “shadow,” “image,” or “spirit” of the shaman’s hands entering the patient’s body to remove the offending object). During a brief return visit to Jogasui, a community that has been established near the site of Faro Moro, I was told of an elderly birth attendant, Ñaine, who lives in Tunucujai, and who uses blowing and passing of hands to prevent women, especially women who have had Caesarean sections, from having any more children. The Ayoreo insisted that his method is effective, and they cited the names of two patients that have not had any more children since they were treated by him.

Some of the curing songs I recorded are accompanied by sucking to remove the pain. This seems to contradict the distinction Sebag makes between sucking and blowing, which he presents as a series of binary oppositions of the kind fashionable in the heyday of Lévi-Straussian structuralism (Sebag 1965:93). Sucking and blowing are techniques used by shamans referred to as *dajjnane* (sing. *dajjnai*). Blowing is more often used to cure minor illness, while sucking is used to cure more serious or chronic illness and may involve the removal of large objects. Sebag cites the cases of shamans that removed a snake and in another case a banana from their patients (Sebag 1965:23). There are different classes of *dajjnane*. Some communicate with and derive their powers from the spirits of fish and water creatures, while others derive them from land animals, from birds, or other creatures of the air.

The Ayoreo also recognize a separate category of shamans, *jnajapode*, who might better be described as seers. Through their dreams and visions they learn songs that the spirits teach them and can foresee dangers, such as epidemics or attacks by enemies. One of the eldest men in Jogasui, Cojñoque, relates that his father was a seer or “man of knowledge” who would sing his revelations. For instance, on one occasion he dreamed that a spirit (*dicore*) had warned him of an impending attack by the Direquedejnaigosode (the Ayoreo from Bolivia). The *jnajapode* are not usually *dajjnane*, but there have been notable exceptions, such as Uejai, the leader of the Guidaigosode at the time of contact, who was an accomplished

daijnai and seer. Apparently, on one occasion Uejai dreamed that a giant anteater had chased his people. This was a sign that evil would befall the group. He had always advised them not to eat defective animals, but apparently some Ayoreo from his community had killed and eaten a blind anteater without informing him. This was in 1986 just as the Ayoreo of Campo Loro were preparing to make contact with the Totobiegosode. Within a few days news reached Campo Loro that five Ayoreo from the group had been killed in the encounter.

The curing songs themselves, the *sarode*, are short recitals that can be repeated as necessary, and are shorter and simpler than the Cuna shaman's song described by Lévi-Strauss. Most share a similar structure. They start with the singer identifying with an animal or plant that used to suffer the condition the song is intended to cure, and the song then explains that the animal or plant has the power to cure itself, and can use this power to cure others. The same themes are repeated, then expressed in a slightly different way, and repeated again, and so on. Just as with the Cuna shaman's song, the song often relives the experience of the patient. Perhaps the best way to give a sense of the *sarode* is to offer some examples. A song to cure an ear infection runs as follows:

I am Digorocoi [a species of woodpecker]

I am Digorocoi

I am Digorocoi

I am Digorocoi

I make holes in the trees: dirt enters my ears, leaving me totally deaf

I make holes in the trees: dirt enters my ears, leaving me totally deaf

I make holes in the trees: dirt enters my ears, leaving me totally deaf

I make holes in the trees: dirt enters my ears, leaving me totally deaf

I cannot hear anything ...

But now I can, with this ...

I cannot get up, I am lying on the ground, but then I suck at my inner ear ...

I save myself, I save myself

I save myself, I save myself

My inner ear is fine, I can hear again

I have cured myself, I have cured myself

I have cured myself, I have cured myself

My inner ear is cured

My inner ear is cured

My inner ear is cured

254 *John Renshaw*

My inner ear is like new, I am Digorocoi
My inner ear is like new, I am Digorocoi
My inner ear is like new, I am Digorocoi
Yo chi, yo chi, yo chi
Yo chi, yo chi, yo chi [noise of ear ache]

I can cure others. I suck others who suffer from ear ache. I can open the ears
of others ...

I can cure ear ache ...

I can open the hearing of others ...

I can suck the inner ear of those with ear ache, the pain leaves them and they
are happy

I can suck the inner ear of those with ear ache, the pain leaves them and they
are happy

Because I can ... with this ...

Because I can ... with this ...

Because I can ... with this ...

I am Digorocoi, I am Digorocoi

I can also cure others ...

Who suffer from pain in the inner ear

My inner ear was blocked ...

But I suck others, and I heal them

Now they feel well again

I have opened their hearing ...

Yo tidi, tidi, tidi

Yo che, yo che, che, che [sounds of ear ache]

I am Toroi [another woodpecker]

I can also cure those whose inner ear is blocked ...

I can also open the ears of those that have gone deaf

I can also suck those who have ear ache, and I open their hearing

I save them, I save them, I save them

I can open their ears ...

They are happy again

Because I have opened their ears

They are happy again

Because I have sucked at their inner ears

I have opened their hearing

And I have saved them ...

Yo che, yo che, che, che

Yo tidi, tidi, tidi ... [sounds of ear ache]

In some *sarode* the singer starts by identifying with the infected organ, using onomatopoeia to express the pain felt by the patient, and only later identifies the animals that have the power to cure the illness. A *sarode* to cure stomach pains goes as follows:

I am the stomach
 I am the stomach
Yo oooh, oooh, oooh
Yo oooh, oooh ... [noise of stomach pain]
 My pain that I suffer is terrible!
 The pain in my stomach is terrible, *ii, iii* [noise of stomach pain]

When a stomach pain catches a person it doesn't allow them to eat
 The pain makes the person suffer ...
 I am the stomach, I make them suffer! *Aieee* ...

I am Aruco, Aruco [a small armadillo]
 I am Aruco, Aruco, if I suck, if I suck the stomach, the pain will go away immediately
 If I suck, if I suck the stomach the pain will go away immediately

When I suck, the pain takes me, the pain gets into me, *teri, teri* [noise of the pain]
 It takes me... *teri, teri, teri* [noise of the pain]
 The pain takes me ... me, me ... the pain takes me, me ...
 The pain takes me until my blood comes out, until my blood comes out
 I am great, great, great ...
 When the pain enters me, I suck my stomach until the pain passes

With this particular song, Santiago noted the singer sucks at the patient's stomach, then sings again. I will give another example, this time of a song to cure an eye infection that involves two similar animals, Capomira, a small frog that lives in the sand and comes out and sings when it rains, and Ugobedai, described as a kind of spiny gecko:

I am Capomira [a small frog], I am, I am ...
 I have good eyesight, good eyesight, good eyesight ...
 I go into the ground, into the ground. When I come out nothing is wrong with my eyesight
 I bury myself in the sand, nothing happens to my sight
 Nothing happens to my sight, nothing ...

I can cure other people
 I suck the pain of eye infections, and the pain goes away

256 *John Renshaw*

I make the pain go away, it goes away ...

I have good sight

Good sight

Good sight ...

Nothing happens to my eyes

Nothing happens to my eyes

Yo tidi, tidi. Yo cha, cha ... [sounds of the pain of an eye infection].

I am Ugobedai [a species of gecko]

I have an ugly head

I have an ugly head

I have an ugly head

I have an ugly head

I can make the pain in the eyes pass away

I can make the pain in the eyes pass away

I can make the pain in the eyes pass away

Tori, tori, tori, torii, torii ... [sound of the infection being cured]

I too suffer pain in my eyes

I too suffer pain in my eyes

I too suffer pain in my eyes

I come out of the sand

I come out of the sand

I come out of the sand

I come out of the sand, but my eyes are healthy

My eyes are healthy, my eyes are healthy

I am great

I cure pain in the eyes

I have good sight, good sight

The condition or the sickness is sometimes personified. A song to cure burns—which, it should be noted, are sometimes self inflicted to show pain at the death of close friend or relative, or on occasion simply to demonstrate courage—describes the power of the flames, while a song to cure diarrhea describes the stomach twisting, the defecation, and the burning sensation in the rectum. Similarly a song to cure a headache includes the following lines:

I wanted to be a big (serious) illness

But, I am going to be a headache

I am going to be a headache

I am going to make a headache
 I am going to make a headache
 I am going to make a headache and I am going to hurt a lot
 I am going to hurt a lot
 I am going to hurt the head ... I am really going to hurt a lot
 I am going to be a really painful headache
 I am going to be a really painful headache

I am going to hurt
 I bang the head against the ground
 I bang the head against the ground
 I am the headache
 Yo, to, to, to, to, to
 Ye, ca, ca, ca, ca, ca [the noises of a headache]

The first question we should ask is whether or not the *sarode* are effective. In fact, the evidence is somewhat contradictory. I think most Ayoreo would agree that the songs usually do achieve their intended results. This is perhaps no different from our own perception of standard Western medical treatments, such as the use of antibiotics. If the patient recovers, it is understood to be a result of the treatment. No one asks whether the patient would have recovered without the treatment. If the patient does not recover as soon as expected there are always stronger or more radical actions that can be taken. For the Ayoreo this would involve other diagnoses and perhaps recourse to other techniques. In the days before the Ayoreo had access to Western medicine, this would probably have involved diagnosis by a shaman (*dajnai*). Nowadays, if a patient does not improve, the Ayoreo will usually seek Western medical help in the nearest urban center such as Porto Mortinho or Filadelfia.

The failure of the first line of defense, whether it be *sarode* or an antibiotic, does not usually bring the technique or the pharmaceutical product itself into question. In some cases it may bring about a reassessment of the diagnosis or, perhaps more likely, a reassessment of the seriousness of the case. In fact, most of the *sarode* I collected—as well as those published by Sebag and others—are intended for what are apparently rather simple or obvious conditions: eye infections, headaches, stomach pains, burns, wounds, or prolonged labor. If the *sarode* fail to achieve a cure, it may mean that the condition is actually due to some underlying cause. The logic here is exactly the same as that described by Evans-Pritchard (1976) in his study of Azande witchcraft. If an Ayoreo cuts his foot with an ax while chopping wood it is an accident. However, if the wound becomes infected and fails to heal, the patient and his kin may begin to look for other

explanations. Unlike the Azande, the Ayoreo are less likely to interpret this as malice on the part of others, although this is still a possibility. Indeed, deliberate malice, usually on the part of outsiders rather than people from within one's own community, is commonly used to explain serious illness and death in other Chaco societies (cf. Grubb 1925:161). Ayoreo are perhaps more likely to interpret serious illness and misfortune in terms of infractions, referred to as *puyac*, a word that means "danger" or "filth." *Puyac* refers to a complex set of rules about diet, walking in the bush at certain times, and disturbing the animals that hibernate during the winter, especially *poji* (the iguana) and *asonjá* (a nightjar). The case of the blind anteater, mentioned above, is fairly typical of this category. Note that the person that commits the act is not necessarily the same person that suffers the illness or misfortune.

In the end, both Ayoreo and Western medicine must fail, since we all eventually have to die. I think the Ayoreo accept some deaths as being the result of natural causes, such as old age, rather than infractions of alimentary rules or enemy shamans. The need to explain serious illness and misfortune is not unique to the indigenous peoples of the Chaco. For example, it is a recurrent concern for Western patients, who—unless, and often even if, they accept one of the world religions—have no generally accepted conceptual scheme to explain misfortune (other than those mathematical models of the kind used by engineers and underwriters to calculate the highest rainfall likely to occur in 10,000 years or to calculate the chances of being killed in an air crash). In fact, as Susan Sontag demonstrates in *Illness as Metaphor* (1979), illness in Western society is not simply viewed as a chance occurrence. Rather, it has a moral dimension. Illness is commonly taken as a metaphor to describe social phenomena. Terrorism, hooliganism, or corruption, for instance, are each described as a "cancer" that has to be removed. Metaphors of disability are used in the same way. An argument is described as "lame," or a political party as "crippled," by the incompetence or corruption of one of its leaders, and so on. These metaphors feed back into our understanding of illness and disability. The individual schemes that attempt to explain why one person suffers a particular illness often look to moral infractions that are little different from the Ayoreo concept of *puyac*. Some have a veneer of scientific explanation, which at times makes it difficult to disentangle science and morality. It is now widely accepted, for instance, that cancer is caused by smoking, heart disease by bad diet or lack of exercise, and so on. However, in the United Kingdom, and perhaps even more so in the United States, this kind of explanation is combined with a Puritan ethic that sees hard work and physical exercise as an ideal, and sees the use of almost

any artificial stimulant, such as tobacco, alcohol, and above all "drugs" as morally reprehensible.

In fact, I would argue that the main difference between Western and Ayoreo or other indigenous curing techniques, is the fact that Western pharmaceutical products have to go through a complex licensing process that requires systematic testing, not only to prove their effectiveness but perhaps even more importantly to ensure they have no undesirable side effects. Although this is more systematic than anything applied by nonliterate peoples—in that the procedure involves the methodical recording of a series of tests on animals and/or human volunteers—the underlying rationality is little different from that of the indigenous peoples described by Sebag (1965, 2003) or by Lévi-Strauss (1963:167–185) who both discuss and compare the merits of particular practitioners. In this respect it is interesting to note that in contemporary Western medical practice the skill of the medical practitioner tends to be underplayed. Once a diagnosis has been made, the treatment—whether with drugs or surgery—is automatically expected to achieve the desired result. Indeed, if the procedures are not followed strictly, the practitioner can be liable to legal action for negligence.

In summary, I would argue that Ayoreo curing songs are effective, in the same way that first-line Western medical treatments are, since the patient usually feels better and eventually recovers. Just as Western procedures are not infallible, neither are Ayoreo curing songs. In some cases a revised diagnosis or a more radical treatment is required, while in others the patient is permanently disabled or dies. However, before moving on to the more interesting topic of *how* the cure is achieved, I must address a rather awkward issue. The truth is that nowadays curing songs are rarely used by the Ayoreo. I was told that in Paraguay the Colonia María Auxiliadora is the only community where the Ayoreo use any traditional curing techniques. In most places, when a person is taken sick, the Ayoreo look to Western medicine for a cure. They do this even though it may involve considerable expense, travel, and having to put up with mistreatment and abuse, since in many Paraguayan health centers and hospitals indigenous people are dealt with as if they were second-class citizens.

To begin with, it should be noted that, as far as I am aware, there are no *sarode* to cure AIDS or tuberculosis. These are the illnesses that afflict the Ayoreo nowadays, along with malnutrition and respiratory infections. I was told that elderly people were dying of neglect and malnutrition because their relatives simply do not have the means to look after them. By itself, however, this is not a sufficient explanation to explain the change

in curing practices, since the Ayoreo still suffer the eye infections, burns, cuts, and toothaches (the dentition of most Ayoreo is appalling) that the *sarode* were used for traditionally.

In fact, I believe the reluctance of the Ayoreo to use their traditional curing techniques has more to do with the political economy of the missions than with any rational or epistemic assessment of the effectiveness of the different kinds of treatment. At no point have I heard Ayoreo declare their healing techniques to be ineffective. This contrasts with Susnik's Chamacoco informants, who in the late 1950s and early 1960s described their male initiation cycle as "Chamacoquerías" (1995:7). Interestingly, thirty years later, some of the same Ebitoso informants cited by Susnik, and in some cases their children and grandchildren, have managed to free themselves from dependence on the New Tribes Mission and have readopted many aspects of their traditional culture, including healing techniques similar to those the Ayoreo have rejected.

The case of the Ayoreo is different. In Paraguay they are dependent on three extremely powerful organizations: the New Tribes Mission, the Mennonites, and the Catholic Church (Salesians). These organizations own the missions, run the schools, provide basic health care, offer employment, and monopolize all development activities. They are profoundly jealous of outside interference, and have kept control of virtually all the support that comes from government and international organizations. The Mennonites do not manage any missions among the Ayoreo, but they are the main employers and are increasing their influence in the communities that have split away from the New Tribes Mission and the Salesians. Since the Ayoreo were first settled, all the missionary organizations have made systematic efforts to devalue Ayoreo culture. Their approaches are different. Perhaps it is unfair to generalize, but the fundamentalists of the New Tribes Mission consistently believe Ayoreo shamanism *is* effective, but declare it the "work of the devil," while the Mennonites and Salesians regard it as superstition. There are exceptions. Some Salesian priests are more enlightened than this, but their views have not predominated over those of the bishop or the nuns that manage the day-to-day activities in the Colonia María Auxiliadora.

In fact, when I started my fieldwork in María Auxiliadora in 1977, I was confronted by a dramatic change that might almost have qualified as a millenarian movement. When I first visited the mission in August 1975 I found the Ayoreo actively engaged in shamanic curing. Then, when I returned in March 1977, Eroí, the leader of the group, had been overthrown and replaced by a younger leader. Even if the younger man had not been selected by the missionaries, he certainly met with their approval.

The Ayoreo of María Auxiliadora, who now identified themselves as Pa'igosode ("people of the priest," i.e., Catholics) were desperate to embrace Christianity. None of the Catholic missionaries spoke any Ayoreo, and much of the preaching that took place at night in the village—which was about a kilometer from the mission—was based on a second-hand understanding taken from Ayoreo that had been evangelized by the New Tribes Mission in Faro Moro or in Bolivia. It seems that after about fifteen years, the Ayoreo in María Auxiliadora had made a conscious decision to abandon certain key elements of their culture and were reinterpreting, or perhaps reemphasizing, that many elements were *puyac* ("dangerous"). This was not, I believe, a case of the Ayoreo losing their faith in the effectiveness of their curing techniques, but rather they seem to have been reassessing the legitimacy of the power that is invoked. Volker von Bremen argues that the Ayoreo try to comprehend new phenomena by reference to their myths of origin, believing that if they can know the myths on which Western phenomena are predicated they will know how to deal with them (2001:278–9). Nowadays, the Ayoreo see the *sarode* and many of their myths as *puyac*. For instance, when I visited Jogasui, I heard a version of a myth of the origin of *chicore* (*Jacaratia hassleriana*), a plant with a large underground tuber that can be used as a source of water when no other water is available. I was told the myth was "dangerous," as its use could lead to drought or to a homicide within the group, since it recounts a tale of jealousy and fratricide. This is perhaps the point from which to move to the discussion of how the *sarode* are understood to achieve their ends. I will argue that it is impossible to comprehend the songs without having an understanding of the epistemological or "mythical" context in which they are used.

THE JNANI BAJADE

At first sight the *sarode* appear to establish a metaphorical relation between the qualities of the animals or plants mentioned in the songs and the process of recovery from a particular illness or condition. Some of the relations appear esoteric—especially to anyone who lacks a detailed knowledge of the species in question—while others are very obvious. A song to cure wounds, for instance, refers to the *samuhú* or bottle tree (*Chorisia insignis*), which quickly closes up and covers any areas that have been damaged. It also refers to the termites' nest, which according to the song can spring up overnight. Indeed, it might be supposed that the metaphorical references have the power of suggestion, strengthening the

patient's will to recover, and perhaps actually reinforcing the patient's immune system. This would be similar to the placebo effect, which in itself is a demonstration of the effectiveness of suggestion. Bastien (1998:87), a medical anthropologist who has worked in the Andes, argues that the future of Western medicine lies in understanding and building up the human body's immune system rather than in destroying the pathogens that cause illness. This change is already happening, especially through research into HIV/AIDS. It also looks back to the days before antibiotics, when tuberculosis patients used to be treated in sanatoriums that provided relaxation, fresh air, cleanliness, and an adequate diet.

I suggest that we have to go beyond Western notions of myth and metaphor if we are to understand the power of the *sarode*. To use Joanna Overing's phrase, we must first "suspend disbelief" and try to understand the songs in the context of Ayoreo epistemology. It is essential to comprehend that the birds, animals, plants, and other beings referred to in the songs are not simply species or representatives of particular species used as a kind of symbolic reference—as I think Lévi-Strauss understands the mythical references in the Cuna shaman's song—but are also *jnani bajade* (sing. *jnani bajai*). That is to say, they are people who used to be Ayoreo and who have been transformed into their present condition as a result of their own choice or of events narrated in a corpus of what can be described as "myths." In principle, I think it is fair to assume that all animals, plants, and even some minerals (for instance, salt) were originally Ayoreo. However, although the corpus of explanatory myths is large, it is not comprehensive, and it would be fruitless to expect an account of how every animal or plant came to be the species it is today. In this sense the curing songs are a mode of knowledge that reproduces the power of the mythical world, and indeed form part of a wider corpus of "myth."

There are two aspects of the *jnani bajade* that need to be explained. First, the *jnani bajade*, like the present-day Ayoreo, are divided among seven exogamic patrilines (the *cuchárame*). Many of the accounts are concerned with how certain species or things associated with a particular *jnani bajai* came to be included among the "possessions" (*edopasade*) of a particular clan. This *a priori* division of the world bridges the division between nature and culture—a division which is perhaps overstated in Lévi-Strauss's analyses of Native American mythology—and generates a series of relationships between certain clans and particular animal or plant species (cf. Lévi-Strauss 1962). These relations are not understood by the Ayoreo as metaphoric, but are regarded as explanatory. The principles are, I believe, generally accepted by the Ayoreo, but the details have not been worked out comprehensively, and there is always room for inconsistency, argument, and reinterpretation. The Ayoreo understanding of the relation

between the *jnani bajade* and the everyday animals they hunt and the plants they gather is complex, and not one that I am fully confident in explaining. However, I would suggest that although the Ayoreo distinguish "everyday" animals and plants from the "original" *jnani bajade*, they also accept the possibility that a particular animal or plant could in fact be the "original" *jnani bajai*, with powers or qualities similar to those beings often described in the ethnographic literature as the "masters" of a particular species (e.g., Reichel-Dolmatoff 1971:80–86).

The second aspect of the *jnani bajade* concerns the Ayoreo concept of time, which is utterly different from modern Western concepts. For most Ayoreo the events of "mythological time" occurred on the edge of living memory and some notable people, shamans and leaders, who died maybe only a generation or two back are already being assimilated into the category of the *jnani bajade*. Some of the accounts I recorded from Lázaro in the Colonia María Auxiliadora identified certain individuals as "ordinary people, like us" while in other cases it was not clear whether the individuals referred to were really *jnani bajade* or not.

The idea that the world as we know it is only three or four generations old may be more widespread than is generally acknowledged. Descola, for instance, notes that the Achuar believe the world was created three or four generations back (1997:223–6). This means the Ayoreo are living in a world that is fresh and new and full of possibilities that our Western, scientific understanding simply does not allow for. In fact, while the Ayoreo give little importance to the notion of linear time, they have a very developed sense of cyclical time, and their most important ceremonies and prohibitions are related to the alternation between the "closed" winter dry season and the "open" summer rainy season (Kelm 1971; Fischermann 1976:99–101).

In the West, it is the concept of linear time that tyrannizes us. The progression from youth to middle age, old age, and finally death, is epitomized in the banality of descriptions of career progression or those advertisements for pension funds that show people worried about their old age, saving so they can finally enjoy a leisurely existence that is free from the burdens of work or sickness. I am not sure whether the Ayoreo are really that concerned about age, other than as a marker that assigns people to general social categories, such as *jnacariode* ("young men"), *gapudie* ("young women"), *jnani* ("adult men"), and so on. Paul Wyma, a missionary in Puesto Paz, Bolivia, once told me he had asked an elderly Ayoreo his age. The old man counted on his fingers, remembering the most important incidents in his life—the Ayoreo count years as "summers" (*chiquerone*)—and, after giving it considerable thought, he replied with surprise, "I must be all of seventeen years old!"

The *jnani bajade* are not only situated on the edge of living memory, but are also imminent in the sense that they can appear and act in the present, and perhaps lead a parallel existence similar to Australian notions of dreamtime. They appear in dreams. In Jogasui, Cojñoque recounted the case of Igaobidei, a great seer, who had eaten the flesh of a deer. The deer appeared to him in a dream and spoke to him, telling him not to eat venison any more. When he awoke he called his son. "I have been cursed by a deer," he said, and started to sing a song that the deer had taught him. In this case the deer is understood to be a *jnani bajai*, both a deer and an Ayoreo, an original deer/person, or perhaps a Master of Deer.³ The Ayoreo also believe that the master of a particular animal or plant species can appear to a hunter or anyone wandering alone in the forest. An encounter of this kind is dangerous, but provides an opportunity to acquire power. Indeed, aspiring shamans deliberately seek visions of this kind by consuming tobacco juice—sometimes mixed with the leaves or bark of other plants—which makes them lose control, run off into the forest, induces visions, and allows them to converse with the animals and plants (cf. Sebag 1965:8–12).

I would argue that it is this same power that the singer is harnessing in the *sarode*. The references to the animals, plants, or natural phenomena are not intended metaphorically. Rather, they literally call on the power of the *jnani bajade* mentioned in the songs. The songs are quite explicit on this point. In the song to cure ear infection, given above, Digorocoi (the woodpecker) is not just a bird, but is understood to be both an Ayoreo and the "Original Woodpecker." The song could equally well be described as a myth, since it is part of the same *jnani bajade* corpus and it explains that Digorocoi developed the power both to treat his own earache and to cure others. The use of the first person: "I am Digorocoi," is quite deliberate, since the healer/singer is literally assuming the power of this particular *jnani bajai*. This helps to explain why the *sarode* are understood to be potentially dangerous, as they call on powers that are not fully under the singer's control, and bridge the divide between the original, undifferentiated world of the *jnani bajade* and the present mundane but ordered world of the everyday.

THE EFFECTIVENESS OF THE *SARODE* AND WESTERN MEDICINE

From the Western "scientific" point of view, there is perhaps little difference between the suggestive power of metaphor and the power

of the *jnani bajade*, since neither is believed to be empirically effective. However, for the Ayoreo the difference is significant. The Ayoreo are able to understand and use metaphor and are quite capable of distinguishing metaphor from the kind of power relations implicit in the *sarode*. This I think helps explain why the curing songs are no longer used. They are not simply a technique for curing—comparable to herbal or pharmaceutical products—but are part of a moral order that is continually being reassessed as the Ayoreo attempt to integrate their experiences of the contemporary world with their own conceptions of the origins of society and the natural world. Despite thirty or forty years of unrelenting assault by the religious missions (not to mention the government agencies responsible for education and health care), the Ayoreo have learned to question the legitimacy of their traditional sources of power without necessarily questioning their effectiveness. At the same time, I believe they express a sense of frustration at not being able to grasp or appropriate the power of Western medicine or technology (see Von Bremen 2001:284–5). This suggests that the Ayoreo do not understand the *sarode* to be universally effective in the way that Western medicine is supposed to be, since their conception of the *sarode* is dependent on a theory of knowledge that is quite different from Western scientific knowledge.

If the *sarode* fail to challenge our understanding of the world, it is only because we are situated in our own social universe. We are individuals living in small family units within vast states, and are dependent on extraordinarily complex, impersonal, and fragile social systems to provide for even our most basic needs. This is a far cry from the arid thorn forest of the Chaco, where life depends, first and foremost, on water or water bearing plants; on finding tortoises or anteaters for food; and on evading or confronting jaguars, hostile enemy groups, and the attacks of malevolent shamans. This brief glimpse into the world of the Ayoreo should at least cause us to reflect on our own notions of time and order. If nothing else, I find that it illustrates the extraordinary importance we give to notions of time that historically are very recent creations. Our notion of time is inextricably tied into our political economy. Weber illustrates this very effectively in the *Protestant Ethic and the Spirit of Capitalism*, in which he quotes Benjamin Franklin:

"Remember that *time* is money. He that can earn ten shillings a day by his labour, and goes abroad, or sits idle, one half of that day, though he spends but sixpence during his diversion or idleness, ought not to reckon *that* the only expense; he has really spent, or rather thrown away, five shillings besides" (in Weber 2001:14).

For all of us in the Western world, time is a scarce commodity. We struggle simply to “find the time” to comply with our commitments. This extraordinary concern with time and timekeeping is part and parcel of the expansion of eighteenth- and nineteenth-century European colonial empires. Accurate timekeeping was vital first for navigation and later, with the expansion of railways and steamships, universal timekeeping became essential to coordinate the movement of goods and peoples across empires. In the longer term, our notion of history is inseparable from literacy. This is true even of oral history, which in essence involves writing down and, in the process, transforming individual memories into texts that form part of a universal, collective memory, whereas the difference between history and prehistory is precisely the difference between the literate and the nonliterate. We have to go further, into the vast expanses of geological time, if we are to understand the relation between ourselves and the other species that share our world.

If the world of the Ayoreo is based on such different assumptions, can the Ayoreo offer us any insights into the effectiveness (or ineffectiveness) of Western medicine? Unfortunately they can, and the insights they offer are really things we already know but perhaps are unwilling to articulate. First, the Ayoreo do not question the effectiveness of Western pharmaceutical products, or surgery, or any other techniques. This is knowledge that they want to participate in and share. The real issue is quite different. It is one of equity. How, they ask, can it be that with all the power of modern technology and organization, they and their children have to suffer and die for want of medicines or simple treatment? What kind of a society is this that obliges the Ayoreo to work as ranch hands or laborers—or in Santa Cruz (and increasingly in the Mennonite Colonies of Paraguay) as prostitutes and beggars—and does not allow them to earn even the minimal wages needed to attend a clinic, pay for medicines, or receive hospital treatment? This is a harsh criticism and it should make us reflect more seriously on the priorities and organization of modern medicine. On the one hand we have cutting-edge medical technology that can extend the quality and length of life of some people in ways that would hitherto have been unimaginable. On the other hand, many people, including the elderly Ayoreo, are dying from malnutrition and neglect.

This brings us back to Lévi-Strauss and to the discussion of indigenous healing and psychoanalysis. I would like to suggest that one of the reasons why, since Lévi-Strauss wrote his paper, our anthropological understanding of indigenous healing has had so little impact on everyday Western medical practice is that those psychoanalytic techniques that require skill, understanding, and a system of meanings that has to be shared by the

healer and the patient have little place in a system of health care built on the marketplace. As health becomes a commodity, interest is lost in this kind of research, and it is not likely to attract the kind of serious, consistent funding that would be needed to move on and integrate indigenous healing into the repertoire of accepted medical practice. What I am proposing here is a real-world program of research that emphasizes seeing, talking, and doing, not simply the production of academic texts. Unfortunately, in almost every country in the world, the provision of health care is being driven by an obsession with market economics. This leaves little time or patience for developing or applying psychoanalysis, or even for developing a more coherent understanding of the social and economic context of the illnesses that afflict particular patients. Indeed, until we can better comprehend our own situation and move toward a society based on greater equality and mutual respect, the anxieties of the sick will continue to be compounded by fear, confusion, stigma, and economic need.

NOTES

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1. Following conventional usage, I use the generic term "shaman" to refer to various kinds of healers and seers. In Paraguay the Spanish equivalent, *chamán*, is widely used in Spanish and Guaraní, and in fact offers a good example of a term originally taken from the anthropological literature that has been adopted into everyday language.

2. At the Congress of Indigenous Peoples held in Asunción in March 2005, the Ebitoso asked that they be treated as a separate people from the Tomaraha. They are usually described as "subgroups" in the ethnographic literature.

3. The Ayoreo, unlike most peoples of the Chaco, did not consume the flesh of deer.

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