

Bonesetters and Curers in a Mexican Community: Conceptual Models, Status, and Gender

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In the indigenous Mexican village of Hueyapan, there is a clear contrast between the supernatural beliefs curers use to explain illness and the naturalistic assumptions made by this community's bonesetters. In addition to employing different conceptual models, the two types of healers differ with respect to their manner of recruitment, training, types of illnesses treated, social status, and gender. These differences add up to a seeming enigma: in a community where men largely control political, economic, and religious affairs, the higher status role of curer is undertaken most frequently by women and the lower status specialty of bonesetter by men. Hueyapan's health care system becomes less problematical, however, when it is recognized that recruitment to the bonesetter and curer roles is shaped by pragmatic considerations of role continuity and compatibility independent of the social status of these two occupations.

Key Words: bonesetters, curers, ethnomedicine, gender, Nahua, Mexico

Ethnomedicine, the study of health care beliefs and practices, is presently a flourishing field of inquiry within anthropology (Andritzky 1990; Heggenhougen 1987; McElroy and Townsend 1989). As a scholarly product of this anthropological specialization, descriptions of the beliefs and practices of healers abound. However, herbalism and shamanic forms of healing are frequently described to the relative neglect of practices such as surgery, massage, and bonesetting (Frank 1961; Jones 1972; Kleinman 1980).

Research on Mesoamerican ethnomedicine reflects this general tendency to investigate shamanism and herbalism. Curers are well described in a number of publications (e.g., Dow 1986; Fabrega and Silver 1973; Sandstrom and Sandstrom 1986; Young 1981). In contrast, anthropologists have rarely described Mesoamerican bonesetters in any detail (Anderson 1987; Paul 1976). This is unfortunate in light of the unique medical services they offer and the fact that for the Nahua-speaking area alone, bonesetters are practicing in a number of widely dispersed

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communities (García de León 1968:283; Münch Galindo 1983:211; Nutini 1968:92; Nutini and Isaac 1974:117,214,224; Sandstrom 1991:139,234). Though relatively little can be inferred from these extremely brief reports, they do indicate that bonesetters are part of a viable medical tradition in which hands-on, biomechanical techniques are used to treat disorders that can be characterized in etic terms as anatomic or physiologic rather than psychosocial.

This article has two goals. First, we contribute to the description and understanding of bonesetters, a much neglected type of healer. An overview is offered of bonesetters in Hueyapan, an indigenous Mexican community. Following Lock and Scheper-Hughes (1990:49), we investigate the way in which the bonesetter's knowledge of the body in illness and in health is culturally constructed. As will become clear in what follows, the beliefs and practices of bonesetters contrast with those of curers who practice in the same community.

Second, we investigate the tendency for men and women to adopt different healing roles in Hueyapan. As McClain (1989:16) notes, "why gender is significant to some healing discourses but not to others is a question that ... [merits] further study." This question, as it arises here, is particularly interesting, for we find that women predominate in the more prestigious role of curer while the lower-status role of bonesetter tends to be filled by men. These two types of healers are also different in other ways, including their modes of recruitment, training, healing techniques, and responsibilities. Furthermore, they employ different conceptual models, including beliefs about human anatomy, physiology, and pathology. Bonesetters employ a naturalistic model in which musculoskeletal disorders are assumed to have resulted from a careless step or an unfortunate blow. They also use biomechanical and medicinal treatments exclusively, since the disorders they treat are not thought to have a supernatural cause. In contrast, curers use a supernatural belief system to understand and treat illnesses that are determined to have been caused by sorcerers, witches, or punitive spirits. The human body for Hueyapan's curers is composed of souls as well as internal organs, viscera, and nerves.

RESEARCH METHODS

Our data are primarily based upon interviews carried out in San Andrés Hueyapan, a rural community in the Sierra Norte de Puebla, Mexico. These interviews were conducted during more general ethnographic research undertaken by the first author and several field assistants over a total of 18 months from 1983 to 1987. Most of the approximately 6000 bilingual Nahuatl- and Spanish-speaking residents of Hueyapan cultivate subsistence and cash crops and raise animals. In addition, most women weave cloth for both home use and sale, while most men engage in migrant wage labor at times.

After 13 months of research, a snowball sampling technique (Bernard 1988: 98) was used to determine the number, sex, and type of medical practitioners working within the municipality of Hueyapan. As the result of an exhaustive search, 12 bonesetters (10 men and 2 women) and 18 curers (13 woman and 5 men) were identified. Of these, eight bonesetters and nine curers responded to a list of open-ended questions in Nahuatl concerning their beliefs and experiences related to

illness and healing. One man is counted in both categories since he works either as a bonesetter or as a curer, depending upon the situation.

Each medical specialty within Hueyapan is relatively discrete in its healing domain. Healers are distinguished from one another in clear-cut terms as bonesetters, curers, or midwives, with very little overlap in the medical conditions they treat (Huber 1990a: 159–169). Where overlap occurs, it is mainly in the work of curers and midwives. Villagers also occasionally seek care from the one doctor and two part-time nurses who work in Hueyapan and from those in surrounding towns.¹ These individuals practice medicine based upon a medicoscientific paradigm that distinguishes them from every other kind of medical practitioner from Hueyapan. Physicians remain at the periphery of the local world view because time, distance, cultural differences, and especially cost limit access to their services.

STATUS AND RECRUITMENT OF BONESETTERS AND CURERS

Sample Characteristics

The eight bonesetters and nine curers are similar on most measures of socioeconomic status. Compared to other residents of Hueyapan, they grew up in relatively poor or low-income families and most are still low in income. Many also report being orphaned or having had to live with and work for relatives and godparents at an early age. In contrast to the physician and nurses, all grew up and live in this community. In addition, they have little or no formal schooling. Reported ages are approximate, since most informants do not usually think in terms of precise dates of birth nor do they remember events of the past in exact calendrical terms. Both groups of healers reported an average of about 55 years of age at the time they were interviewed and had practiced an average of about 30 years. On average they began to heal while they were in their twenties, although bonesetters were somewhat younger, having begun on the average at age 22 while the average curer began at age 27.

Status Differences

Though the status of bonesetters and curers is similar in most ways, they do contrast on two important overt dimensions. For one, curers in Hueyapan tend to be women (13 women versus 5 men) while bonesetters tend to be men (10 men versus 2 women). The one person who falls into both categories is a man. Curers also differ from bonesetters in that the former are accorded more esteem. As described below, it is much more difficult to become a curer, and the curer benefits from supernatural sanctions and involvements absent in the selection and activities of the bonesetter. The bonesetter is essentially a rural worker who has acquired a skill that is valuable at times, while the curer is accorded higher respect because this practitioner needs considerable skill and valor to successfully negotiate with powerful, supernatural beings capable of causing personal, familial, and communal disaster.

Hueyapan's residents acknowledge this difference in status in a number of concrete ways. For example, requests that a curer heal a patient are always accompanied with a gift of drink or food, and couched in ceremonial speech (cf. Hill and Hill 1986). The higher status of the curer is also reflected in the practice of compensating her with relatively generous gifts. In addition, when residents pass by a curer walking on the street, they generally bow and respectfully greet her. These sorts of behaviors rarely occur in the case of bonesetters.

This difference in status is consistent with research among the Maya residents of Zinacantan. In that community, the greatest prestige accrues to curers (*h'iloleték*) and bonesetters who use purely religious curing methods. "... [T]he least highly regarded bonesetters are those who use actual physical manipulation of a broken or dislocated area—in short, a bonesetter who actually sets bones is considered far inferior to one who merely prays over them" (Fabrega and Silver 1973:42).

Recruitment

In Hueyapan, a curer generally begins treating patients only after having been called to this vocation preternaturally through dreams. These dreams often coincide with or are shortly followed by a series of serious illnesses and the prediction by an experienced curer who "knows" that it is this individual's destiny to cure. A bonesetter, in contrast, begins healing matter-of-factly by attempting a cure when an occasion arises that calls for someone to lend a hand.

Healers and non-healers alike report that curers accept their destiny only after having experiences resembling those of the following woman when she was approximately 20 years old (see also Huber 1990a:162–166; Huber 1990b:54–56). "I dreamt of flowers, that I was flying from tree to tree ..., of flowers [and] medicines to cure *mal aire* [an illness caused by spirits of deceased individuals]." She also dreamt of snakes, "but sometimes I didn't recognize them. I would dream I was there with them.... Even today I sometimes dream of snakes." Later, when asked what her *curandera* (curer) said when she told her of her dreams, "She told me I was going to be a curandera, and she gave me medicines and told me to visit some churches." "Did you get sick before beginning to heal?" "Yes ..., I had a fever and no appetite." "Why do you think a curandera has to get sick?" "It is said it is because they must heal, but they don't want to." Remembering a conversation from the past, she added, "the curandera told me she would cure me, but that afterwards I would have to heal others."

Five of the nine curers who were interviewed reported a calling that consisted of a triad of dreams, serious illness, and an experienced curer's prediction that they were destined to become healers. A sixth curer was recruited in the same manner except that she reported a mystical, dream-like experience rather than dreams as such. She recalled, "Three snakes wrapped around me, stuck to me, and I got very sick. My mother took me to a curandero—I was eight years old—and he told me to wait until I was 10 or 11 before beginning to heal. After that, he cured me." Of the remaining three curers, one had dreams and was sick, but she was not asked if a healer had predicted healing as her destiny. A second experienced dreams and

sickness but was never told it was her destiny to become a curer. Finally, the call of one curer was limited to a severe illness experience.

In stark contrast, a typical bonesetter recalled, "I was 15 years old. One of my brothers hurt his hand and arm. I tried to fix them for him. I succeeded, and that's how I discovered how to find a dislocated bone in order to heal it." Another bonesetter reported that he started treating fractures and dislocations after successfully treating himself.

No, I didn't dream before commencing to set bones. I [discovered I could set bones] when I ... broke a bone and set it myself ... I began by massaging it, and in one or two days I felt much better. It was afterwards that people asked who cured me, and I answered [that] nobody [had, that] I had [treated] myself by simply looking for the damaged part and massaging it ... I started to work as a bonesetter because people came to see me and asked that I do them the favor [of treating them].

On questioning, both bonesetters denied that they experienced anticipatory dreams, motivating sicknesses, or were told by another healer that they had a calling. They simply found that from time to time after their initial experiences people came to them because word spread that they could heal.

Two additional bonesetters recalled similar recruitment histories. Of the remaining four, one experienced an illness which he interpreted as not related to his becoming a bonesetter. A second bonesetter recalled dreams leading him to think that "maybe they would give me work as a *curandero*." That did not happen, and he explained that there was no connection between those dreams and the fact that he became a *huesero* (bonesetter) instead. In the same vein, a sorcerer caused him to be sick after he had gone to a dance and gotten into a fight. However, the curer who treated him said nothing of his having a calling, and he did not interpret that illness as meaning that he would become a healer. Third, one woman who worked both as a *huesera* and a *partera* (midwife) experienced both premonitory dreams and life-threatening illnesses. She felt these experiences predicted that she would become a *partera*, but also felt, with equal conviction, that they had no bearing upon her career as a *huesera*. Finally, the man who worked both as a bonesetter and a curer clearly distinguished the two callings. He experienced dreams and sickness that shaped his decision to practice *curanderismo* but started bonesetting much later by simply taking on his first patient.

TRAINING AND PRACTICE

All eight bonesetters report that they were self-taught through trial and error and had the courage to apply pressure and cause pain in the process of massage, joint manipulation, or setting bones. Of the eight, only one recalled seeing a practitioner who might have served as a model, a *huesero* who once "fixed" his wrist. Bonesetters consistently report that they never worked together in situations where one might learn from another. Also, most cannot recall having changed their treatment methods very much, although one said, "I didn't know that much at first, but now I know [bonesetting] quite well."

Bonesetters treat fewer patients than curers in the course of a lifetime. In addition, some of the more experienced and better known bonesetters treat more patients than do others. The number of patients seen by the *huesero-curandero* was not determined. Of the remaining seven bonesetters, one claimed to treat 10 or 12 patients per month. The rest estimated that they see from one to two patients per year to no more than two to three per month.

With one exception, curers deny having received formal instruction from experienced practitioners. Rather, they learned about healing from curers they had gone to in the past when they were sick themselves or from curers they observed in their childhood and youth who treated others. However, such exposure was not thought of as an influential method of learning. Statements recorded in the field imply that a curer simply "knew" how to heal through essentially supernatural means. One curandera explained, "It is like a gift that the Virgin Mary sends." Another explained, "Some are simply born to heal. They don't need someone to show them." When asked if she got any help from her own curandero, another in our sample responded, "No, he only gave me a box of candles to light on my altar." Like bonesetters, curers work alone with little or no direct exposure to the methods of others.

Only one curandera reported having received some training and supervision as an initiate. She was 30 years old at the time. Nevertheless, from her perspective, these experiences had very little to do with her ability to heal. "The curandero would always take me with him," she explained. "We would arrive and sit down and he would let me do the healing. [However], the only thing he did was watch me.... [We would go] see a sick person, but when we got there, he would not touch him."

Both kinds of practitioners agree that curers see more patients than do bonesetters. They indicate that this is due to the fact that curers treat many more kinds of maladies than bonesetters and because comparatively few people suffer a fracture or dislocation. Based upon the interview materials, we estimate that curers consult with one to five patients per week.

CONCEPTUAL MODELS OF BONESETTERS AND CURERS

Symptoms Treated

Bonesetters report that they treat uncomplicated fractures, dislocated joints, musculoskeletal pain and dysfunction, and sprains, simple cuts and bruises, but nothing else in their capacity as bonesetters. Explicitly, they never treat the illnesses treated by curers. Curers on the whole do not treat musculoskeletal problems. The limited exceptions include one who treated a single case of shoulder pain and the most exceptional, a curer who stated that she at times attempts to reduce dislocations and refers these individuals to bonesetters only if she fails.

In terms of physical symptoms, curers describe treating a wide variety of physical and mental conditions, including agitation, feeling crazy, bad thoughts, dizziness, headache, heart pain, loss of appetite, diarrhea, stomachache, fever, night sweats, insomnia, swelling in the feet, bleeding from the mouth, sluggishness,

blood clots, cramps, jaundice, paleness, facial paralysis, "pneumonia," and in children, depressed fontanelle.

Emic Disease Categories

Spanish or Nahuatl descriptions of disorders in the conceptual model of bonesetters translate directly into English as the musculoskeletal problems described above. On a very simple level of anatomic and pathologic description that points directly to fractures, dislocations and bruises, the emic symptom nomenclature is identical to the etic symptomology.

The emic vocabulary of curanderas contrasts strikingly with bonesetters in this regard. The etic and emic terms are very distinctive. Curers most commonly speak of fright (*nemauhtli* or *espanto*), soul loss (*ahmo tonalcahua* or *perdida de alma*), evil eye (*mal de ojo*), attack by a female lightning-bolt spirit (*netatil* or *quemadas*), and spirit possession (*mal aire*). The list can be extended to include *pasmo* (notable for diarrhea), *reuma* (symptoms include swollen and painful ankles), *calentura* (characterized by fever), *cuajo* (noted for sluggishness, phlegm, clotting of blood), and *bilis* (manifesting in part as jaundice).

Diagnostic Methods

To arrive at a diagnosis, a bonesetter uses his senses, as one respondent put it. Bonesetters visually examine for apparent fracture or dislocation. Above all, using "the sensitive pads of their fingers," they palpate for the "point" of fracture or dislocation. Several note that it is sometimes a bit difficult to precisely locate the injury when there is a considerable amount of swelling. One bonesetter also described identifying a shoulder problem by feeling both shoulders, in effect using the healthy shoulder as a normal control against which the painful shoulder could be compared. This is similar to the way in which a physician-surgeon diagnoses in the medical examination of any bilateral anatomic structure.

The diagnostic procedures and assumptions of curers are very different. First, the diagnosis is based upon symptoms which are extremely vague, diverse, and (in biomedical experience) often non-specific (cf. Fabrega 1970:312; Shweder 1979:328). However, curers interpret them to designate quite specific emic nosologies. *Espanto* (fright), for example, is recognized, according to one curandera, if the patient reports turning pale and sweating a lot upon going to sleep, if he or she complains of head, heart, or stomach pain, if fever is present, or if he or she feels dizzy. Another respondent explained that people who have *espanto* do not eat and are very sleepy. A third again mentioned night sweats and having no desire to do anything. A fourth explained that in *espanto* the patient "dries up," is not hungry and does not eat. Similarly, for *perdida de alma* (soul loss), one curandera made this diagnosis for a person who was not happy, while another made the same diagnosis for a different individual on the basis of reported symptoms of fever, diarrhea, weakness, and loss of appetite. In still another case, soul loss was attributed to a patient who presented with complaints of being very weak and unable to sleep.

Second, and most importantly from the curer's perspective, a diagnosis is made by taking a patient's pulse at one or both wrists, or elsewhere on a blood vessel. From pulsing a patient, a curer identifies the illness as well as the needed remedy including the required dosage of medicines and ritual. The patient's blood "speaks" to curers and only they have the ability to "understand" what it says. Clearly, this manner of acquiring information about illnesses and their treatment cannot be verified empirically. It is a paranormal experience of knowing (cf. Tedlock 1982:133–138). One sees this in the following example, quoted from field notes.

According to the curer, a man was told by a physician that he was going to die. The curandera rejected this prognosis. She recalls:

I told him he had soul loss. All I did was take his pulse and ask him his name, which was Juan Santos. The others [i.e., the patient's family] said ... I was going to cure him. He wasn't so sure, but I assured him I was going to try. I told him he was enchanted. I told them to find me seven herbs, but I already knew where his soul was locked up. I went at midnight to call it.

Etiology

The bonesetters' view of the causes of the maladies they treat is what anthropologists have categorized in etic terms as natural (Foster and Anderson 1978:53–54; Rivers 1924:40–42). This does not mean that they deny the existence of supernaturally caused illnesses. In fact, several spontaneously reported that they had themselves suffered illnesses caused by witchcraft, sorcery, and punitive spirits. However, they do reject the idea that the supernatural world plays a role in the kinds of injuries in which they specialize. One stated, "People go to bonesetters only because they are careless. If a person gets hurt, is it God's punishment or because they were bewitched? No, it is because of carelessness ... They fall, trip, or stumble." A supernatural explanation was provided only once when it was elicited by a leading question. Thus, one bonesetter explained that people get twisted ankles, because "people fall, or someone trips." When asked, "Is a broken bone a punishment of God?" he answered, "Sometimes yes," immediately adding, "or, it is just the way things happen."

All of the interviews with curers covered etiology though the degree of coverage was somewhat variable. Some of our most detailed information on this topic comes from a key informant who discussed disease causation at length. Like other curers, she states that the illnesses she treats have supernatural causes. God can cause illness, according to this 61-year-old woman with a quarter of a century of experience as a healer, as can the Devil, who may send messages of impending death in the form of owls flying in the night. Witches also cause sickness by taking the form of cats who steal souls, by burying effigy dolls, by praying to the Devil, or by sending *mal aires*, which for the people of Hueyapan are malevolent spirits, often of the deceased. Other intelligent, powerful, and punitive spirits, the *tamatinime*, corral captured souls in caves, enchanted hide-aways, mountain prisons or under stones in streams (cf. Vogt and Vogt 1979:279). In addition, one can catch *espanto* by being startled or dismayed, or after encountering a dangerous snake, a form

tamatinime frequently take. On occasion, a soul simply gets lost when one is asleep and vulnerable.

The remaining curers also commented on etiology, expanding somewhat the explanations of the key informant. One of these also added a possible naturalistic origin by noting that *espanto* can be caused by consuming the wrong kind of food and drink. The latter is the only recorded exception to the finding that causation from a curer's point of view is phrased, ultimately, in supernatural terms.

TREATMENTS OF BONESETTERS AND CURERS

Bonesetting is widespread on a world-wide scale, yet it has rarely attracted research attention. As a result, we first need to clarify this term by comparing and contrasting it with massage. Massage in the treatment of musculoskeletal pain and stiffness is probably a human universal. Any individual might attempt to massage a painful muscle or joint with no training or experience whatsoever. Far different from occasional body rubbers are individuals formally identified and sought out as skilled massagers. The latter exist in various parts of the world, although they are not found in many communities and are entirely absent from some geographic regions. Also widespread are those we identify here as bonesetters.

A bonesetter is someone who, in addition to massage, moves bones as a form of medical treatment. The most obvious association customarily made for the term is that a bonesetter reduces (sets) fractures. Less obvious is the fact that a bonesetter may also induce motion in painful or impaired joints. That is, after moving a dysfunctional joint to the limit of its usual range of motion, a bonesetter administers a thrust which forces the joint into its parapsysiologic space. In this manner the joint is pressured beyond its normal passive range of motion, but not beyond anatomic barriers, the breach of which would result in osseous, ligamentous, or capsular damage and severe pain. Associated with this kind of a manipulative thrust is a popping or cracking sound, apparently the result of an explosive release of gas (mostly carbon dioxide) that is dissolved in the tissues of the joint (Kirkaldy-Willis 1988).

When joint manipulation is employed to reduce a subluxation (a dislocated joint), it has obvious therapeutic potential if correctly carried out. In the absence of a dislocation, joint manipulation for the treatment of joint pain and stiffness is assumed to reduce pain and increase range of motion, though its efficacy has not been clinically investigated except in the treatment of the joints of the spine (Anderson 1992; Anderson et al. 1992). For the purposes of this study, we make no assumptions about efficacy. Massage, by stimulating blood flow, by serving as a counter-irritant that blocks pain transmission, and perhaps also by releasing endorphins, provides temporary palliation for muscle and joint pain.

Without exception, all of the people who identify themselves as *hueseros* or *hueseras* in Hueyapan provide massage and all have on occasion manipulated peripheral (non-spinal) joints. Consider this description of how a bonesetter treats a twisted ankle. "First I massage. Then I pull. When the bone pops or gives a sign of being properly in place, I rub on heated medicines: *yerba de golpe* (an herb), *aguardiente* (an inexpensive rum) with salt, and *aceite de comer* (cooking oil)." Other

herbal medicines and preparations that are applied by Hueyapan's bonesetters are made from *poztecpanh* (a plant used to treat fractures), *xaxamantzin* (a plant used for bruises and fractures), *sauco* (elder tree), iodine, and rubbing alcohol. Aguardiente is perhaps the most frequently used topical treatment. Like rubbing alcohol and iodine, it is used to clean an injured area. In addition, it is used in conjunction with massage and joint manipulation "to heat the tendons and veins so that they are able to stretch."

Five of the eight bonesetters report having treated uncomplicated fractures including those of the hand, arm, and rib. In the case of a broken arm, the injured limb is often immobilized after it has been set. Several bonesetters report a procedure similar to the following. "[I first] look for the place of the break. Then I set [the fractured bone]. A little later I put heated pine resin, which is like oil, on a thick cloth, and [using] a few reed splints, I fasten them [around the arm with the cloth]."

Of the three who have not treated fractures, one has only been practicing for two years. "I've never treated broken arms. Once a man ... came to see me to set his arm. I felt it and realized it was broken. I told him that it would be better if he went to a doctor because it was probably infected [as well]." Of the remaining two bonesetters who have not set fractures, one was a 75-year-old woman who had been practicing since she was a little girl, and the other was a 49-year-old man who had been practicing for 15 years. Both have among the lowest case loads of the bonesetters practicing in Hueyapan.

The five bonesetters who have treated simple fractures mentioned that there were some kinds of fractures that they had not yet treated or would not attempt to treat. All mentioned that they had not yet treated a compound fracture. Two also mentioned that they would not try to treat a broken clavicle, even though one of these mentioned he would treat a broken hip or a compound fracture if asked to do so. Another who was quite experienced in treating broken arms and shoulder dislocations mentioned that he was never asked to set a broken nose or treat a head injury. With respect to the latter, he remarked "[People with a fractured cranium] have never come to [me for help]. To treat that [kind of injury] would be very difficult, I think."

Interestingly, four bonesetters also report treating musculoskeletal injuries of their own animals. One described how he treated an injured pig. "A [pig's leg] was swollen above its hoof. I realized that a bone had been dislocated. I 'fixed' the bone by massaging it and by feeling the other foreleg, which was more pliant."

Mesoamerican curers are well described in the anthropological literature. It will suffice to note that in complete contrast to bonesetters, curers typically treat a variety of psychological and physical (but nonmusculoskeletal) complaints using religious rituals combined with medicines and talk. Referring to the treatment of soul loss in a Nahua community similar to Hueyapan, Signorini (1981:313-314) states, "The indigenous conception is magic-oriented; therapy aims at the recovery of one's lost 'double' [i.e., soul], while also providing for the use of pharmaceuticals." In Hueyapan, the curers' techniques may include prayer, making offerings to supernatural beings, and exorcising mal aires from the body. They also administer herbal baths, herbal poultices and ointments, herbal teas, herbal wines, and occasionally over-the-counter pharmaceuticals to treat the physiological consequences of supernaturally caused illnesses.

Curers are highly variable within this community in the specific ways in which they conceptualize and treat illnesses (Huber 1990b). However, it is worth noting that a number of Hueyapan's curers allude to their having made shamanic forays into the world of spirits as an important part of the treatment. Consider the following case in which a curer went to recover her patient's soul which was being held captive by a *tamatini*. This all-knowing supernatural being appeared to her in the form of a female lightning-bolt spirit:

At one side of the waterfall was a cave and I entered it to call the [man's soul]. Then a woman appeared and I saw her dancing. I went to the entrance to wait for that lightning bolt and she said, "What do you want?" and I said, "Please ... give me the man." she said, "I'll give him to you right now, [but] you're going to pay me." I told her I would and asked her how much.

After paying the *tamatini* the requested amount, the curer encountered the specter of the man (his soul alone). She then led him out of the cave to freedom, passing three dead men, a bridge, and an altar upon which she left a cross and flowers.

GENDER DIFFERENCES IN HEALING

Men control Hueyapan's political and religious offices (e.g., *presidente municipal*, *regidor*, *fiscal*, *mayordomo*) and their higher status is formally expressed at public and private events such as community-wide saint's day celebrations, baptisms, graduations, weddings, and funerals. At banquets associated with these occasions, men sit on chairs at tables while women sit on woven floor mats. Men also make formal speeches and are greeted, served food and drink, and dance before women do. Given the higher status of men, we are led to raise the following question: why do women tend to undertake the more prestigious role of curer, and men the lower-status occupation of bonesetter? The best way to answer this question is to consider the healer's status and gender separately.

The status of Hueyapan's bonesetters and curers is undoubtedly linked to the different conceptual models they employ. Bonesetters base their diagnoses and treatments upon a naturalistic model. For bonesetters, the human body constitutes a skin-covered structure of bones, joints, sinews, and muscles that either functions acceptably or does not. When an individual is painfully slowed down or incapacitated by a musculoskeletal complaint—by a broken bone, a dislocated joint, or a bruised muscle—the pain and dysfunction are assumed to have taken shape in a world of physical objects and activities. It is believed that the cause was a careless step or an unfortunate blow, and that the bonesetter can initiate a cure by direct biomechanical and medicinal methods. No wider eschatological anxieties stimulate speculation about supernatural causes and outcomes. This is how bonesetters think and act in terms of musculoskeletal disorders.

In contrast, the body for Hueyapan's curers comprises souls as well as internal organs, viscera, and nerves. When patients experience the gastrointestinal, urogenital, pulmonary, or neuropsychiatric symptoms that are characterized in illness terms such as *espanto*, *perdida de alma*, *mal aire*, and so on, they are often interpreted as having been caused by sorcerers, witches, or punitive spirits. For treatment of these illnesses, residents turn to curers who were selected and in-

spired by supernatural beings and who use skills in supernatural methods to resist the forces of evil. They neatly identify this congeries of diseases and their appropriate treatments as intrinsic to the mythically defined world. Theirs is a supernatural belief system.²

The fact that Hueyapan's curers employ a complex supernatural model and bonesetters a simple naturalistic one is clearly related to their differences in status. People accord greater respect to curers because they deal directly with powerful and potentially dangerous supernatural beings. This differentiation is consistent with findings in other communities. As was previously mentioned, the use of a supernatural or naturalistic conceptual model is related to the status accorded to curers and bonesetters by the Maya residents of Zinacantan (Fabrega and Silver 1973:42).

Turning now to the issue of gender, I.M. Lewis (1989:26–29) makes the important observation that often, in cross-cultural perspective, the sex of religious healers reflects political and economic power relations. If healers undertake central political and economic roles in their society, they are likely to be men from advantaged social strata. If, as in Hueyapan, healers are more peripheral in political and economic terms, they tend to be women or men of comparatively low status.³

Lewis's analysis can be used to explain why curers in some Nahua-speaking communities are predominately women while in others they tend to be men (see also Huber 1990a:170–171). Male curers are found in communities where they serve as both shamans and priests. That is, in addition to undertaking their primary duties as healers of supernaturally caused illnesses, these men play central roles at public-communal rites dealing with animal and crop fertility, the control of the weather, the installation of public officials, and saint's day celebrations. Like a *presidente municipal*, *regidor*, *fiscal*, or *mayordomo*, a shaman-priest acquires considerable status and power within the community. In addition, the economic rewards of this role are relatively high since curing as well as public-communal services are remunerated. Male shaman-priests predominate in the Nahua communities of Ixhuatlán de Madero, Veracruz (Sandstrom and Sandstrom 1986:72), in Tlaxcalan communities surrounding Malintzi volcano (Nutini and Nutini 1987:335), and in communities of the Sierra Nevada (Bonfil Batalla 1968:117).

In Nahua communities where the majority of curers are women, the curing role is restricted entirely to healing illness. There is no report of these curers participating in the kinds of public-communal activities engaged in by shaman-priests. Compared to shaman-priests, their role is peripheral in political and economic terms. In addition to Hueyapan, female curers predominate in the Nahua communities of Atla and Huauchinango, Puebla (Montoya Briones 1964:155; Nutini and Isaac 1974:223), Mecayapan, Veracruz (Münch Galindo 1983:201), and Tepoztlán, Morelos (Lewis 1963:101–102; Redfield 1930:152).

Based on Lewis's analytical framework, it is understandable that most of Hueyapan's curers are women. The curing role is narrowly defined and curers do not participate in public-communal events in this town. The argument presented so far, however, does not account for the surprising fact that most of Hueyapan's bonesetters are men. Compared to curers, bonesetters have a lower status and are even more peripheral in political and economic terms. Thus, it makes sense to ask why men would ever become bonesetters. After all, it is a medical specialty that provides them with modest social and economic rewards at best.

Our explanation is that there are important factors in addition to the healer's

status that strongly influence Hueyapan's sexual division of medical labor. First, recruitment to curing and bonesetting in this community is shaped by the pragmatic consideration of role continuity (cf. Finerman 1989:24–41). In Hueyapan, the curing role is essentially an extension and amplification of the supportive, nurturing role ascribed to any woman within the family and community. Women are generally expected to treat minor illnesses and provide their families with a healthful balance of "hot" and "cold" foods.

The second factor influencing Hueyapan's sexual division of labor is role compatibility. The unpredictable demands of curing are more compatible with a woman's traditional economic responsibilities. They can frequently be found at home and the domestic tasks they undertake can be temporarily interrupted by patients, and later resumed without unduly jeopardizing the welfare of their household. The fit of the curer role with the scheduling of men's work is much weaker, given the requirement that men be available to hoe, plant, weed, and harvest during specific time periods throughout the year, or be absent from the community for weeks or months at a time as migrant workers.

In contrast, the role of bonesetter is easier for men to adopt. Often the injury occurs in the fields where the men are working, and a bonesetter is already present. In all events, the treatment requires no elaborate advance preparation and is relatively brief.

Finally, men become bonesetters because the services they provide are remunerated, albeit, very modestly. More importantly, they value their special skills and feel good about the positive impact they have on the lives of their patients. As one young male bonesetter put it, "besides enjoying [bonesetting, I do it] for each person's and my own personal well-being."

CONCLUSION

We view the investigation of Hueyapan's bonesetters and curers as informing the medical anthropology enterprise itself. Researchers are often confronted with medical pluralism. Practitioners operating within a particular health care system may differ in their manner of recruitment, training, and in the types of activities they undertake as well as conceptual framework, status, and gender. Such a situation represents a significant challenge for medical anthropologists. Our article suggests that highly differentiated conceptual models, as exemplified by those employed by Hueyapan's bonesetters and curers, can coexist in a community without leading to conflict or confusion. We also suggest that while the gender of healers may reflect political and economic power relations as suggested by Lewis, such correlations are not always straightforward nor inevitable.

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NOTES

1. The people of Hueyapan use the Nahuatl term "tamataliqui" to refer to a bonesetter as well as the Spanish terms "huesero" and "huesera" to refer to a male and female bonesetter, respectively. According to Alan R. Sandstrom (personal communication) and Italo Signorini and Alessandro Lupo (1989), the Nahuatl terms "texixitojquet" and "omitpahtiani" are used to refer to bonesetters in other Nahuatl-speaking areas of Mexico. The Nahuatl terms "tepahtihqui" and "tepahtiani," and the Spanish terms "curandero" (male curer) and "curandera" (female) are often used in Hueyapan to refer to a curer. Besides one doctor and two nurses, bonesetters, curers, and midwives are the only types of medical practitioners found in Hueyapan. Specifically, there are no *yerberos* (herbalists) or *espiritistas* (spiritualists) in this community.
2. Bronislaw Malinowski (1948:29) described a similar difference in the Trobriand Islands. He was referring to the cultivation of coral gardens rather than to bodies, but the symbolic and cultural dynamic is similar. "Thus there is a clear-cut division: there is first the well-known set of conditions, the natural course of growth, as well as the ordinary pests and dangers to be warded off by fencing and weeding. On the other hand there is the domain of the unaccountable and adverse influences, as well as the great unearned increment of fortunate coincidence. The first conditions are coped with by knowledge and work, the second by magic."
3. The analytical framework suggested by Lewis characterizes quite nicely the relationship the formally educated medical doctor in Hueyapan and those in surrounding towns have to Hueyapan's curers and bonesetters. This is interesting since Lewis worked with materials that dealt exclusively with religious practitioners. He did not entertain the possibility to extending his analysis to healers who employ naturalistic conceptual models.

The doctors who occasionally treat Hueyapan's residents are invariably from a higher socioeconomic class than curers and bonesetters. In addition, they belong to the dominant ethnic group of the region (locally referred to as *mestizo*). Consistent with Lewis's work, doctors tend to be men, while Hueyapan's curers and bonesetters, who in this wider context are peripheral, tend to be women or low-status men, respectively.

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