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The Recruitment of Midwives in a Nahuat-Speaking Community of Mexico and the
Likelihood of Their Cooperating with Biomedical Practitioners¹

by

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INTRODUCTION

This chapter examines the recruitment of midwives² in San Andrés Hueyapan and the likelihood of their cooperating with doctors and nurses. Hueyapan is a Nahuat-speaking community of the Sierra Norte de Puebla, Mexico. In Hueyapan, a woman or man is recruited to the midwife role after having one or more of the following experiences: 1) receiving a divine call (e.g., premonitory dreams and illnesses), 2) serving an apprenticeship with an experienced traditional midwife, 3) responding to an urgent request for help from an expectant mother, and 4) receiving training from a biomedical practitioner. Training is provided in a variety of programs sponsored by the IMSS, SSA, and INI. The manner of recruitment is related to the likelihood that a midwife regularly collaborates with nurses and doctors. Collaboration, the training of midwives by biomedical practitioners, and the proliferation of clinics and hospitals in the Sierra Norte de Puebla have substantially changed midwifery practice in Hueyapan.

RESEARCH METHODS

The majority of the approximately 7,000 residents of Hueyapan are bilingual Nahuat and Spanish speakers³ although the ability to speak Spanish is related to such factors as age, sex, and amount of formal schooling. Most residents cultivate subsistence and cash crops and raise animals. In

²An earlier version of this chapter contains comparative information on the recruitment of Nahua midwives and midwives from forty additional indigenous groups. It is entitled "Recruitment, Training, and Practice of Indigenous Midwives from the Mexico-United States Border to the Isthmus of Tehuantepec" and is found in the forthcoming book, Mesoamerican Healers (Brad R. Huber and Alan R. Sandstrom, eds. Austin: University of Texas Press).

³Huber and Toribio Martínez are responsible for the English translations, and the transcriptions of Spanish and Nahuat interview materials. All of the midwives speak Nahuat fluently; Ana is the only midwife who chose to be interviewed in Spanish.

addition, most women weave and embroider cloth for both home use and sale, while many men engage in migrant wage labor for periods of one to several months each year.

There were 16 actively practicing midwives⁴ (15 women and 1 man) living in Hueyapan in 1996. Seven midwives were interviewed on one or more occasions during the 1980s and again in 1996. In 1996, eight more were identified and interviewed. Most of Hueyapan's midwives have been practicing for several decades; only four began their practices in the last ten years. Interviews were conducted by Huber, Toribio Martínez, and two field assistants during more general ethnographic fieldwork that total twenty-two months and span the years from 1983 to 1996.

OVERVIEW OF THE MIDWIFE ROLE⁵

Prenatal Care

Hueyapan's midwives attach great importance to prenatal care. Natividad⁶ claims to make 10-15 prenatal visits with each woman beginning sometime during the second trimester. The rest of Hueyapan's midwives report making

⁴In addition to midwifery, an individual in Hueyapan may undertake additional healing roles. Six of the sixteen individuals who are currently active as midwives in Hueyapan are also curers. There is also one woman who serves as a midwife, curer, and bonesetter.

⁵For additional information on Nahua midwives see: Alvarez Heydenreich 1976:94-96; Barrios 1949:65-66; Baytelman 1986:52-53; Bonfil Batalla 1968:102; Huber 1990a, 1990b; Law 1960:158; Lewis 1963:359-367; Claudia Madsen 1968:102-104, 130-132; William Madsen 1955:50, 1957:164-165, 1969:78-81, 1983:114; Montoya Briones 1964:39, 102, 178; Montoya Briones and Moedano Navarro 1969:279-282; Münch Galindo 1983:125-126, 197, 210; Nutini 1968:89; Nutini and Isaac 1974; Nutini and Forbes de Nutini 1987:335; Margaret Redfield 1928:102-105; Robert Redfield 1930:135-136; Sanchez Flores 1982:23-24; Sandstrom 1991:296; Sandstrom and Sandstrom 1986:72; Sepúlveda 1973:14; Signorini 1982:322 Soustelle 1958:107; Tuynman-Kret 1982:71-72, 90; Unidad Regional de Acayucan 1983:61-62; and Vexler 1981:52, 133, 140-141.

⁶ All personal names are pseudonyms.

between one to four prenatal consultations. However, some women contact midwives for the first time just prior to birth or even after they have gone into labor (See also Sanchez Flores 1982:23). Care may be provided in the midwife's home, but it is more common for the midwife to make a visit to her client's home.

Messaging pregnant women is an essential part of the prenatal care provided by Hueyapan's midwives. The massage⁷ is focused on the abdomen but not limited to it. Its main purposes are to make the pregnant woman feel more comfortable, warm her abdomen, determine the position of the fetus, and when necessary, change it in order to avoid a breech birth. See Mellado Campos (1989:94) for a good description of prenatal massage.

A more rigorous kind of massage used to change the position of the fetus is known as a *manteada*⁸. A blanket (*manta*) is folded several times to form a thick sash which is placed underneath the pregnant woman's waist while she is laying down. The midwife stands over the woman holding each end of the sash and firmly pulls up on each end two or three times. Another technique related to the *manteada* consists of the midwife partially picking up a pregnant woman by her legs and shaking her in the manner of a bell (*campanear*).

In Hueyapan, only one midwife employs a *manteada*, and none report using the *campanear* technique. However, all massage women during their prenatal

⁷In the message observed by Huber, Natividad directed the woman to lie on her back with her knees slightly raised. She then lifted her blouse and rubbed and probed her abdomen with her hands and fingers. The massage lasted less than ten minutes, and upon its completion Natividad was offered sweet breads and coffee (see also Lewis 1963:356).

⁸The *manteada* and similar techniques are found mostly in central Mexico and in north and central Oaxaca.

visits. Some, like Felicia and Rafaela, report applying an ointment⁹, rubbing alcohol, aguardiente, or olive oil during a massage. The majority are also concerned about preventing and treating *mal aire*. If a pregnant woman is suffering from *mal aire*, midwives perform *limpias*. For example, Natividad passes rue and elder sprigs, and an egg over the woman's entire body, especially over the woman's abdomen. Medicinal teas prepared with rue, elder, and zapote leaves, aspirin, ribbons, sewing needles, porcupine spines, starfish, and sand dollars¹⁰ are also used. Note the use of "pointed" objects to treat the intrusion of a *mal aire*¹¹.

Midwives from Hueyapan and many other Nahua communities may enter a *temazcal* with their pregnant clients¹². The goal is to warm the body and make the bones, ligaments, and muscles of the pelvis flexible. However, Hueyapan's midwives caution that pregnant women should take no more than one to three prenatal sweatbaths; too much heat can harm the unborn child.

Prenatal visits are also occasions for midwives to give advice about food and activities. They recommend that pregnant women eat well and remain as active as possible although they should avoid lifting heavy objects. Margarita states,

Here [in Hueyapan, we women] are accustomed to work, grind [corn] or wash [clothes]; others go get wood from the countryside even though

⁹The ointment is commonly called "Belladoña"

¹⁰Steeping sewing needles, porcupine spines, and sand dollars in hot water is used to make a tea known locally as *patanechicol*.

¹¹We wish to thank Dr. John Rashford (Professor of Anthropology, College of Charleston) for this insight.

¹²It was routine for pregnant women from Hueyapan to bathe in the *temazcal* every other day some 25 years prior to this study (Nutini and Isaac 1974:188). In general, the use of the *temazcal* has been steadily declining during the last 10 years and many have been falling into disrepair.

they will soon give birth. Before, [in the past], they even brought back water [to the house]. And this didn't hurt them. On the contrary, the muscles are more elastic, and when they give birth there's not much of a problem. [For] those who do no [work], the muscles become extremely stiff.

Childbirth

Some of Hueyapan's midwives claim their dreams reveal the day their clients will give birth, or when a woman will encounter difficulty in childbirth. Natividad states,

Now, if I dream that I am going to wash clothes and the water "tries" to carry them away, and I don't let it, this means someone is going to come [visit me], and her child will die. If I dream that the water carries the baby's clothing away, well... this means that the baby is going to be born, or rather that it will be born without life [i.e., stillborn].

Ana and Pablo generally require that clients come to their homes to give birth. Pablo likens his practice to that of a doctor's. The other midwives generally attend births in their clients' homes. Midwives report that women prefer to give birth in a room separate from the rest of the house. If the house has just one room, a section is screened off with a hanging blanket.

Only the midwife and one other adult woman (e.g, the woman's mother, mother-in-law, or aunt) are usually present in the birth room. Some midwives, such as Ana and Rafaela prefer to deliver babies without assistants. In contrast, Mercedes generally brings her husband to administer an injection of oxytocin-sintocinon to make contractions stronger. And Pablo typically works

with his wife. He recognizes that women feel more comfortable with a woman present when they are giving birth, and bathing and dressing afterwards. Some women discourage their husbands from actively assisting in birth while others permit it. Children are usually made to leave the home altogether, or if it is night, are put to bed.

Prior to the delivery, some of Hueyapan's midwives light a candle on the household altar. As labor proceeds, many routinely administer a medicinal tea¹³ to speed delivery. Ana is the only midwife who reports manually monitoring the dilation of the cervix. Hueyapan's midwives generally do not have any direct contact at all with their clients' genitals.

Most of Hueyapan's midwives prefer that women kneel or squat when giving birth (see also Sanchez Flores 1982:24). Antonia's opinion is typical: "Well, here [in my house, women] only kneel. And from what I have seen, it is always better to be kneeling than lying down, because they lose a lot of force lying down." Women who kneel or squat steady themselves by holding onto a low stool, a rope hung from a rafter, a pole set into the dirt floor, or a wooden crate. Blankets, a sheet, clean rags, or a *petate* (palm mat) are placed underneath the woman.

Ana insists that a woman give birth in a supine position. Gabriela and Josefa attend women in any position they prefer. For Gabriela, the birth position "depends on the desire of the pregnant woman. In a hospital, it's different. Here, a woman says 'I would like to deliver in this form [i.e., the form that suits me']." When women are kneeling or squatting, most midwives position themselves behind the woman so that they can easily put their arms around the woman's abdomen to squeeze. However, midwives sometimes

¹³Common ingredients to make teas are royal sage, black pepper, brown sugar, sea shells, cooking oil, wine, zapote leaves and pine needles.

position themselves at the squatting woman's side or even in front of her.

All of Hueyapan's midwives report massaging a woman's abdomen when she is about to deliver. Antonia reports, "almost all [women] begin by walking and walking for a long time. Then when they start to feel really bad, they sit or lay down, or rather, they kneel down. Meanwhile, I help them from behind by putting my hands around their waists, trying to give them massages".

If an infant does not begin breathing on its own, midwives may sprinkle alcohol or water on the infant's face, back, or chest, gently pull on the umbilical cord, or make a loud noise near the infant's ear by tapping on a hoe or by having a rooster crow. After the delivery, Hueyapan's midwives clean the newborn's eyes, nose, and mouth, tie the umbilical cord and cut it with a small knife, scissors, or a sharp piece of cane several finger widths away from the umbilicus. A piece of cotton gauze or cloth is placed around the end of the cord, and the cord itself is wrapped in cloth and held in place by a small belt. Then the midwife wraps the baby's lower body with a square piece of cloth or a diaper that is held in place with another belt. Some midwives bathe an infant in warm water about an hour after birth; others wait until the following day. Regardless, the infant is wrapped in warm cloths and placed in a warm blanket. After the birth of the placenta, the midwife assists her client in washing and changing her clothes, placing a ball of cloth (*fiador*) underneath a sash (*ilpicat*), and binding her waist. According to Margarita, "when the baby comes out, the mother feels that her stomach is empty. Thus, it's necessary to place on her a little ball and hold it tight with a sash so she can channel her forces."

After binding a woman, a candle is sometimes placed on the household altar as an offering of thanks. With the exception of the mother, Natividad says all of the adults present drink a toast of *aguardiente* and smoke a

cigarette after the successful birth of a child. A woman's husband typically buries the afterbirth and pieces of cloth soiled during birth.

Prolonged Labor and Problematic Births

In cases of prolonged labor, midwives massage and apply additional pressure to the woman's stomach, and request that the woman "push" harder. They may also ritually cleanse the woman of *mal aire*. If the delivery of the placenta is slow in coming, midwives place the end of a woman's braided hair in her mouth in an effort to induce gagging which will in turn help her to "bear down". They attempt to stop excessive bleeding after delivery by having women lie down. In cases of a breech birth, several midwives report that they immediately seek the assistance of another midwife (usually Natividad or Ana) or that of a medical doctor.

Postpartum Care

In Hueyapan, the midwife typically checks up on mother and baby the day after birth. She may bathe the mother with warm water at that time, but most wait two or three days to bathe their clients. Hueyapan's midwives usually return to their client's house three times after birth to bathe the infant, massage and bind the woman's abdomen with a sash, and wash soiled blankets and clothing. Midwives report that the latter duty is especially burdensome.

In the 1950s, it was common for women from Hueyapan to take sweat baths the fourth, eighth, and twelfth day after birth (Nutini and Isaac 1974:188). This is less common now than in the past. When Hueyapan's midwives accompany their clients to the sweatbath, they use bunches of herbs referred to as a "pezma" to fan and warm the woman's body, especially her vagina. After the final sweat bath, the danger of family members becoming ill with *quemadas* is minimized. *Quemadas* are skin rashes thought to be caused by contact with a

woman shortly after she has given birth.

SOCIO-ECONOMIC CHARACTERISTICS OF HUEYAPAN'S MIDWIVES

Geographic Distribution of Midwives

Most of Hueyapan's 16 active midwives are concentrated in and around the *cabecera* (head town). Five of Hueyapan's active midwives live in Sections 1 and 2 which jointly make up the *cabecera*. Three more live within a 30-45 minute walk to the center of town (Sections 3, 4, 5, and 6). Five live within a 60-90 minute walk (Sections 7 and 8), while three live in Sections 9 and 10, some 2 to 8 hours walking distance from the municipal center. Sections 9 and 10 are sparsely populated.

Sex, Marital Status, and Age

Hueyapan has one male midwife and there were other men practicing midwifery in the recent past. Ethnographic accounts usually give the impression that midwives are always women. Nevertheless, male midwives are found in at least twenty-one different linguistic groups in Mexico (Huber and Sandstrom, forthcoming). Three of Hueyapan's midwives are widowed. Eight are married and four are separated from their spouses (N=15). In 1996, Hueyapan's midwives ranged in age from 16 to 88 years old. The mean age was 53 (N=16). Seven started in their teens and 20s; seven others began in their 30s; and two waited until they were 60 years old before taking on clients.

Socio-Economic Status of Family of Origin

All of Hueyapan's midwives report growing up in poor or very poor families. In addition, of the thirteen midwives for which we have information, only seven lived with both of their parents prior to marriage.

Six experienced the death of one or both of their parents. Teresa's childhood experiences are not unusual for midwives:

I became an orphan at nine years of age and that's why I didn't enter school. I lost my father... My relatives were poor. After I became an orphan, I grew up [living] with my grandfather. Sometimes I helped him care for sheep or I worked for other families. At age fifteen, I married.

When Ana was growing up, she lived in poverty in a household headed by her mother. Her father drank heavily, drained the family of resources, and was often absent. Shortly after she married, her husband abandoned her and her two young children. Fortunately, she found work in the *cabecera's* clinic helping with cleaning chores. She recalls:

I was in a situation [with] scarcely [anything]. I had two children and they depended upon me... My mother encouraged me, 'Why don't you teach yourself to attend births?' I told her, 'No. I've never done it [before].' [She said], 'Take the risk. There are many people who know nothing about [births, but] they risk it', And that's how I began.

Caseload

The amount of time Hueyapan's midwives work is difficult to determine precisely. However, all work part-time with their remaining time spent in child care, textile manufacturing, agriculture, or animal husbandry. Based on our calculations for the mid 1980s, each midwife attended on average 20 deliveries per year. If midwives visit women three times before and three times after they deliver, then the "average" midwife would make approximately 140 house calls per year, or about three each week. Of course, some midwives (Ana, Natividad) have a case load higher than the average while others have a

lower case load.

Compensation and Economic Status

In the mid-1980s, most of Hueyapan's midwives did not charge a fixed fee for attending births; they accepted whatever their clients felt was appropriate. However, by April of 1996, midwives were more likely to have a customary fee. They accepted or requested compensation that is approximately equal to that of an agricultural laborer working in Hueyapan for 1-15 days (approximately \$3 to \$47 US). In addition, midwives sometimes receive small gifts of food, cigarettes, or liquor when clients first come to their homes to request their services, and during subsequent prenatal and postnatal visits. They also receive between \$0.65 to \$1.35 US for a prenatal massage.

Hueyapan's midwives vary with respect to their economic status. Approximately five midwives are very poor by local standards. For example, Josefa lives in a small, two room, wood plank home with a tar paper roof and a packed earth floor. She uses wood to cook in a ground level hearth and does not own a bed, table, or chairs. At the other extreme are four midwives who live in households approaching that of Ana's. Ana lives in a four room cement block home, with plaster walls, a tile roof, and a cement floor. She owns beds, tables, chairs, and a television. Five others have an intermediate status. None of Hueyapan's midwives are wealthy by local standards, although some have improved their standard of living relative to their family of origin.

SACRED ROUTES TO THE MIDWIFE ROLE¹⁴

¹⁴ Note that none of the sacred and secular recruitment paths discussed below are mutually exclusive. For example, Antonia, received a three-component sacred calling, apprenticed herself to a traditional midwife, and

In Hueyapan, many midwives experience premonitory dreams and illnesses between the ages of eight and fifteen. Their call comes from *tamatinime*, all-knowing supernatural guardians of nature who take the form of lightening bolts, snakes, children, and old people in traditional clothing. Margarita recalls,

I use to dream of lots of babies, and on one occasion I dreamt some old people [i.e., *tamatinime*] took me to a mountain. There they taught me how to do this work [i.e., midwifery]. There they taught me about some medicinal plants and told me that with them I will cure my children [i.e., help her daughters give birth]. The old woman wore a wool skirt and the old man wore [white] cotton trousers. I recognized those plants that grew between rocks and they are [herb] for "mal aire grande" and Pelican flower.

Sometimes these dreams frighten individuals destined to be midwives, and they experience soul loss. This, in turn, may prompt them to consult a local cure who reveals that they must either become midwives or continue suffering and eventually die. Felicia recalls she was so sick that they had to carry her when she needed to move. I had awful pain in my feet and I wasn't able to walk nor stand up. And they only were able to cure me with "Pajtanechicol"... Well, [my curer] told me to work [as a midwife] so that I would be able to stand up, because if I didn't, I wouldn't be able to stand up.

SECULAR ROUTES TO THE MIDWIFE ROLE

Apprenticeship

Five of Hueyapan's midwives report serving an informal apprenticeship

responded to an urgent request by a woman who was about to deliver.

to an experienced midwife. Francisca worked with one of her sisters-in-law. Ernestina and Natividad worked with their mothers who encouraged them to follow in their footsteps. Natividad reports that when her mother gradually lost strength, she began to ask Natividad more frequently to assist pregnant women on her own. She gained more and more confidence, and started working independently.

Many of Hueyapan's midwives had ample opportunity to observe healers at work even though they may not have been directly trained by them. Of the 13 midwives for whom information is available, nine report having one or more relatives who are or were midwives. Seven also report having relatives who were curers, and two had relatives who were bonesetters. Traditional healing tends to run in families. Mercedes is exceptional in this regard. In addition to her mother and father, she had a grandmother and a grandfather who were midwives. Her mother's father was a bonesetter and both of her grandmothers were curers.

Midwives Who Are Pressed Into Service

Seven women in Hueyapan became midwives after being pressed into service by a pregnant woman whose birth was imminent. Gabriela recalls she started attending pregnant women when a neighbor who had gone into labor insisted that she help her. Since she lived in a remote part of the municipality, and no one else was available, she felt obliged to assist. She relied upon her memories of the births of her own children which were assisted by a midwife. When word of Gabriela's success spread, other women begin to come to her when they needed the help of a birth assistant.

TRAINING COURSES

Mexico has made a major effort to formally train traditional midwives. They participate in training programs sponsored by the SSA, the IMSS, and INI. Hueyapan's SSA clinic is located in the *cabecera*. It tends to serve people in the immediate vicinity (Sections 1-5) as well as those most distant from Hueyapan's head town (Sections 9 and 10). Four of the seven midwives who received SSA-sponsored training are from these sections (Gabriela, Ana, Isabel, Pablo, Ernestina, Mercedes, Rafaela). An IMSS clinic is located in Section 6, and generally serves residents from Sections 6, 7, and 8. Two midwives (Teresa and Pablo) report training by IMSS-Solidaridad, and live in this part of the municipality. IMSS-Solidaridad and the SSA played an important role in the recruitment of Hueyapan's sole male midwife. Pablo gives the following account:

...Two years ago, one of my daughters was working as a midwife. She married and stopped working. Then [several of Hueyapan's health] supervisors came to see me to ask if my daughter was going to continue [working as a midwife]. I told them that I [also] understood the job of monitoring children under five years of age [because I had been helping my daughter do that when she use to be a midwife]-we weigh them and measure their length in order to see if there are malnourished children in the community. Also we monitor pregnant women in order for us to see if there are high risk pregnancies. [If so], we channel them immediately to [an IMSS] medical clinic so that other [appropriate] measures are taken. And if it is a normal birth, we check them over anyway, and at the very least, we tell them to go to the clinic so that they can be vaccinated against tetanus... They have to give them three vaccinations.

Pablo's knowledge of IMSS-Solidaridad practice and policy, and his

previous experiences with childbirth¹⁵ led to the health inspectors' recommending that he enroll in training courses sponsored by the SSA and IMSS.

Isabel, Natividad and Antonia report receiving training under the auspices of INI. INI has established a number of regional organizations of traditional healers throughout the country. One has recently opened up a clinic for traditional healers (midwives, herbalists, and bonesetters) in Hueyapan's head town. Regional organizations of traditional healers were formed by INI to reinforce the knowledge of traditional healers, legalize their practice, and provide an alternative to the formal health sector with the creation of botanical gardens and community pharmacies stocked with regional herbal products (Congreso Nacional de Medicos Tradicionales Indigenas 1992).

¹⁵Prior to Pablo helping his daughter, he assisted his wife when she gave birth as well as the wives of his nephews, one of his daughters, and a few other women. One of his grandmothers was a midwife and his wife's mother is a well-respected midwife, Ernestina.

COLLABORATION WITH DOCTORS AND NURSES

In the following discussion, collaboration is understood as regularly assisting, consulting with, or providing childbirth-related data to biomedical personnel. Five of Hueyapan's traditional midwives report this level of cooperation: Ana, Isabel, Pablo, Ernestina, and Teresa. Two midwives with the greatest level of cooperation are discussed below.

Prior to Isabel's formal training in midwifery, she helped a pregnant woman who experienced a long and difficult delivery. Residents came to know of her success and were also aware of the fact that her mother "knew a little about midwifery" and her father "knew a little about bonesetting". As a result, she was elected *Presidenta* of DIF by the residents of Paso Real, a hamlet in Section 10. She then went to Teziutlán, the region's largest city, where she attended an INI-sponsored course about traditional medicines, and then to Zacapoaxtla, the region's second largest city, for two weeks to learn about patent medicines, and procedures for recording birth-related information and referring complicated cases to doctors at hospitals.

Isabel refers pregnant women who are at high risk in Section 10 to the doctor at the head town's SSA clinic. In return, the doctor tells low risk clients to maintain contact with Isabel. Isabel also monitors high risk births when the doctor is on vacation or otherwise outside of the community. In addition, she files reports of her activities on a monthly basis and requests that parents vaccinate infants.

Like Isabel, Teresa has a relatively high level of formal training. However, she began her healing career as a curer. After curing for about five years she experienced premonitory dreams which led to her developing a strong interest in midwifery. Later she was elected a member of the Committee on Nutrition for Section 8. This led to her being recommended to two IMSS-

Solidaridad training courses by the local health supervisor and elementary school teachers. After she received two health auxiliary diplomas and a midwifery certificate, Tanamacoya's IMSS-Solidaridad doctor held a meeting at a school in Section 8 where he told residents Teresa was trained to help pregnant women, and that she would be referring clients to Tanamacoya's clinic.

Teresa attends low risk pregnancies, handles clients when the doctor is on vacation, and refers high risk women to the clinic. In addition, she vaccinates children, makes home visits with doctors and nurses, and regularly monitors pregnant women from her section. She also advises women at the end of their second trimester to go visit the doctor to have their blood pressure monitored and to discuss their diet. Prior to a delivery, she consults with the doctor and tells the pregnant woman's family to prepare clean clothing. After delivery, she records birth-related information and takes it to the clinic.

Type of Recruitment and Cooperation with Biomedical Practitioners

Lois and Benjamin Paul offer an interesting analysis of the function of a midwife's divine calling. They suggest that the status of midwives practicing in the Zutuhil Maya community of San Pedro la Laguna is ambiguous. On the one hand, individuals who petition the assistance of Pedrano midwives couch their requests in ceremonial speech, kiss their hands, offer them food and drink, and send them gifts on festive occasions (Paul 1975; Paul and Paul 1975). Midwives are respected for their deep commitment to their profession, technical competence, and special relationship to the supernatural world. On the other hand, there is "a sharp disjunction between the standards governing

the behavior of women in San Pedro and the behavior required of the midwife" (Paul and Paul 1975:139; cf. Vexler 1981:164). A midwife must be assertive, work outside the domestic sphere, and travel alone at night. As a consequence, she is sometimes criticized by others, and her husband may resent his wife's unpredictable absences or be taunted by his peers who insinuate he is living off of his wife's money. The function of divine election is to make it possible for women to overcome the objections of others and assume the midwife role (Paul and Paul 1975:142-143).

As in San Pedro, midwives with a divine calling in Hueyapan are identified as individuals with a special relationship to the supernatural world. In addition, they are often reluctant to assume their role. The only thing that persuades them to become midwives is the threat of supernatural retribution (i.e., illness and death). In contrast, individuals with a secular calling are initially prompted to become midwives because of an immediate need or because they acquired the requisite knowledge as apprentices and choose to apply it. A secular calling is compatible with the additional goal of generating a cash income either by working independently or by working for the government. A divinely called midwife cannot appear to be self-serving because this would contradict what is publically known about the nature of her recruitment.

If our analysis is correct, there should be a difference between secular and divinely called midwives with respect to: 1) their likelihood of cooperating with doctors and nurses working for the SSA, IMSS, and INI, and 2) the fees they charge. Table 1 ranks Hueyapan's midwives by the degree to which their calling is sacred¹⁶. At the top are five midwives with a purely

¹⁶This is an etic analysis that corresponds with a difference that midwives are aware of in a more general way: the difference between divinely called midwives and those who simply served an apprenticeship or responded to

"secular" calling, e.g., individuals who became midwives after an apprenticeship or an emergency. None of them report experiencing premonitory dreams, illnesses, or a revelation by a curer that they have a "gift" for midwifery. At the bottom of the table are four midwives who experienced all three characteristics of a divine or "sacred" calling. Table 2 shows that none of the seven midwives with two or three characteristics of a sacred calling regularly collaborate with doctors or nurses, while five of eight midwives with a secular calling (Groups I and II) do collaborate. Also consistent with our analysis is the finding that the five midwives who regularly cooperate with biomedical practitioners report receiving among the highest fees. Ernestina and Pablo both charge the equivalent of \$13 U.S. dollars, and Isabel charges \$11. Teresa and Ana report fees of \$33 and \$30, respectively. The only midwife to charge more for a delivery is Mercedes, a divinely called midwife who charges \$47. However, Mercedes is an atypical divinely called midwife. She downplays the fact that she suffered illnesses prior to her becoming a midwife and emphasizes the fact that she served an apprenticeship to her mother and had six close relatives who were midwives or other types of healers.

Concluding Remarks

The increasing number of government-supported clinics and hospitals in the region in conjunction with midwives cooperating with biomedical practitioners and receiving government-sponsored training have had a significant impact on childbirth and midwifery practice in Hueyapan. The number of practicing midwives has increased as has everyone's awareness of the availability of low cost alternatives to deliveries by traditional

an emergency.

midwives. Several midwives reported in 1996 that they have experienced a reduction in their caseloads during the past decade. Margarita claims she is attending fewer and fewer births because there are more midwives now than in the past. In addition, she frequently hears clients say they would rather go to a clinic or hospital than to a midwife because doctors and nurses administer pills and injections to control pain. Gabriela agrees although she observes that even though many women go to a clinic or hospital to give birth, they still come to see her for prenatal massages. Ana, the most active midwife in Hueyapan in 1983, has experienced a tremendous decline in the number of births she attends because clinics charge relatively little or nothing for their services:

[In the past], I attended a lot [of clients], sometimes 1 or 2... or even 3 [per day]. In a month, I use to attend 10 or 12. Now [I attend] 3 or 4. Sometimes a month passes and there aren't any [clients]. And it's because of the same [adverse economic] situation...very difficult... There's no work and nothing is given [to us] now and there's no money. Well..., they [i.e., pregnant women] resort to other means [i.e. medical clinics] that are free. And they're right [to do so]¹⁷.

Another change noted by Hueyapan's midwives is a decline in the use of some kinds of birth technology and the incorporation of new ones. The use of a sharp piece of cane to cut the umbilical cord, cauterizing the cord end, and the pre- and postnatal use of the temazcal are declining. Recently

¹⁷En el pasado, yo atendía bastantes, a veces en el día 1 ó 2, 1 ó 2 hasta 3. En el mes, venía atendiendo 10 ó 12. Ahora 3 ó 4, a veces pasa un mes, que no hay nada. Y es por la misma situación que estamos pasando... muy difícil. Y que no hay trabajo, las cosas ya no se dan, y que no hay dinero, pues... Ellas recurren a otros medios que son gratuitos y tienen razón.

incorporated are pincers to stop the flow of blood in the umbilical cord; a sterile tie, gauze, and tape to wrap the cord; and alcohol to sterilize hands and equipment.

INI has largely promoted the maintenance of tradition such as the use of the *temazcal* and medicinal plants. Moreover, our review of INI's publications, and observations made by Huber of Hueyapan's clinic for traditional healers indicate that only a relatively small fraction of traditional healers actively participate in INI's regional organizations (cf. Mellado Campos 1994:34). Midwives like Antonia are generally reluctant to participate in the clinic because: 1) few clients are accustomed to going to the clinic, 2) client fees are low, and most importantly 3) she often has to close up her house during the day or leave her children alone at home when she works at the clinic.

In contrast, the SSA and IMSS have had a greater impact on indigenous midwifery. Their influence has led to a decline in traditional kinds of birth technology and practices and an increase in new ones. Moreover, our data on training courses and collaboration with doctors and nurses indicate that SSA and IMSS personnel place indigenous midwives in a subordinate position. Traditional midwives are gradually becoming auxiliary health workers under the supervision of formally educated biomedical health workers.

The impact of these institutions has been relatively moderate in Hueyapan when compared to other parts of Mexico. In Morelos, indigenous midwives play an important role in introducing birth control and participating in public health campaigns. The salience of these roles is evident in the terms people use to refer to them: *parteras pastilleras* (birth control pill midwives), *parteras boticarias* (patent medicine midwives), *parteras promotoras* (health promotion midwives), *parteras adiestradas* or *parteras capacitadas* (trained midwives), and *parteras empiricas diplomadas*

(qualified empirical midwives). See Mellado Campos (1989) and Mata Pinzón et al. (1994: 658-659). The general trend is towards a loss of diversity in midwifery practice and the incorporation of indigenous midwives into Mexico's biomedical health care system.

**Table 1: Secular and Sacred Recruitment Paths
of Hueyapan's Midwives**

Name	Section	Characteristics of a Sacred Calling			Characteristics of a Secular Calling	
		Dreams	Illness	Curer Revelation	Apprentice to Midwife	Emergency
Group I: No Aspects of a Sacred Calling						
Gabriela	1	No	No	No	No	Yes
Francisca	6	No	No	No	Yes	No
Ana	1	No	No	No	No	Yes
Isabel	10	No	No	No	No	Yes
Pablo	7	No	No	No	No	Missing
Group II: One Aspect of a Sacred Calling						
Ernestina	6	Yes	No	No	Yes	Yes
Margarita	2	Yes	No	Missing	Missing	Yes
Teresa	8	Yes	No	No	No	No
Group III: Two Aspects of a Sacred Calling						
Natividad	2	Yes	Yes	No	Yes	Missing
Mercedes	10	Yes	Yes	No	Yes	No
Francisca	7	No	Yes	Yes	No	Yes
Group IV: Three Aspects of a Sacred Calling						
Antonia	6	Yes	Yes	Yes	Yes	Yes
Josefa	3	Yes	Yes	Yes	Missing	Missing
Felicia	3	Yes	Yes	Yes	Missing	Missing
Rafaela	8	Yes	Yes	Yes	No	No
	TOTALS	9 (N=15)	7 (N=15)	5 (N=14)	5 (N=12)	7 (N=11)

Table 2: Recruitment (Secular vs. Sacred) of Hueyapan's Midwives by Collaborates with a Doctor, Nurse or Clinic Regularly

Type of Recruitment	Collaborates with Doctor or Nurse on a Regular Basis		Total
	No	Yes	
Secular	3	5	8
Sacred	7	0	7
TOTALS	10	5	15

Fischer's Exact Test	Exact Significance (Two Sided)	Exact Significance (1 Sided)
N=15	.026	.019

REFERENCES CITED

- Alvarez Heydenreich, Laurencia
 1976 Breve estudio de las plantas medicinales en Hueyapan, Morelos. Estudios Sobre Etnobotánica y Antropología Médica 1:85-111.
- Barrios E., Miguel
 1949 Textos de Hueyapan, Morelos. Tlalocan 3:53-75.
- Baytelman, Bernardo
 1986 De enfermos y curanderos: Medicina tradicional en Morelos. México: Instituto Nacional de Antropología e Historia.
- Bonfil Batalla, Guillermo
 1968 Los que trabajan con el tiempo: Notas etnográficas sobre los graniceros de la Sierra Nevada, México. Anales de Antropología 5:99-128.
- Congreso Nacional de Médicos Tradicionales Indígenas (2nd)
 1992 Presente y futuro de la medicina tradicional. México, D.F.: Instituto Nacional Indigenista, Secretaria de Desarrollo Social.
- Huber, Brad R.
 1990a The Recruitment of Nahuatl Curers: Role Conflict and Gender. Ethnology 29(2):159-176.
 1990b Curers, Illness, and Healing in San Andrés Hueyapan, a Nahuatl-Speaking Community of the Sierra Norte de Puebla, Mexico. Notas Mesoamericanas 12:51-65.

- Huber, Brad R. and Alan R. Sandstrom
 2001. Recruitment, Training, and Practice of Indigenous Midwives from the Mexico-United States Border to the Isthmus of Tehuantepec. In *Mesoamerican Healers*. Brad R. Huber and Alan R. Sandstrom, eds. Austin: University of Texas Press.
- Law, Howard W.
 1960 Mecayapan, Veracruz: An Ethnographic Sketch. Masters Thesis, University of Texas.
- Lewis, Oscar
 1963 Life in a Mexican Village: Tepoztlán Restudied. Urbana: University of Illinois Press.
- Madsen, Claudia
 1968 A Study of Change in Mexican Folk Medicine. In *Contemporary Latin American Culture*. Munro S. Edmonson, Claudia Madsen, and Jane F. Collier, eds. pp. 92-137. Middle American Research Institute, Publication 25. New Orleans: Tulane University
- Madsen, William
 1955 Shamanism in Mexico. *Southwestern Journal of Anthropology* 11: 48-57.
 1957 Christo-Paganism: A Study of Mexican Religious Syncretism. Middle American Research Institute, Publication 19. New Orleans: Tulane University.
 1969 *The Virgin's Children: Life in an Aztec Village Today*. New York: Greenwood Press.
 1983 Death of a Curandero. *Notas Mesoamericanas* (9):112-116.
- Mata Pinzón, Soledad, Diego Méndez Granados, Miguel Angel Marmolejo Monsivais, Jose Antonio Tascón Mendoza, Maritza Zurita Esquivel, Yolanda Galindo Manrique, and Gloria Irene Lozano Mascarúa
 1994 *Diccionario enciclopédico de la medicina tradicional Mexicana* (2 Volumes). México: Instituto Nacional Indigenista.
- Mellado Campos, Virginia
 1989 *La atención al embarzo y el parto en el medio rural Mexicano*. México, DF: Centro Interamericano de Estudios de Seguridad Social.
- Mellado Campos, Virginia, Armando Sánchez Reyes, Paolo Femia, Alfredo Navarro Magdeleno, Enrique Erosa Solana, Daisy Mary Bonilla Contreras, and Marina del Socorro Domínguez Hernández
 1994 *La medicina tradicional de los pueblos indígenas de México* (3 Volumes).
 México: Instituto Nacional Indigenista.
- Montoya Briones, José de Jesús
 1964 *Atla: Etnografía de un pueblo Nahuatl*. México: Instituto Nacional de Antropología e Historia.
- Montoya Briones, José de Jesús and Gabriel Moedano Navarro
 1969 Esbozo analítico de la estructura socioeconómica y el folklore de Xochitlán, Sierra Norte de Puebla. *Anales del Instituto Nacional de Antropología e Historia* 2:257-299.
- Münch Galindo, Guido
 1983 *Etnología del Istmo Veracruzano*. México: Universidad Nacional Autónoma de México.
- Nutini, H. G.
 1968 *San Bernardino Contla: Marriage and Family Structure in a Tlaxcalan Municipio*. Pittsburgh: University of Pittsburgh Press.
- Nutini, H. G. and B. L. Isaac
 1974 *Los pueblos de habla Nahuatl de la región de Tlaxcala y Puebla*.

- México:
 Instituto Nacional Indigenista.
- Nutini, H. G. and J. Forbes de Nutini.
 1987 Nahualismo, control de los elementos y hechiceria en Tlaxcala rural.
 La heterodoxia recuperada en torno a Angel Palerm, ed. Susana Glantz, pp. 321-346. Mexico: Fondo de Cultura Económica.
- Paul, Lois
 1975 Recruitment to a Ritual Role: The Midwife in a Maya Community. Ethos 3(3):449-467.
- Paul, Lois and Benjamin D. Paul
 1975 The Maya Midwife as Sacred Specialist: A Guatemalan Case. American Ethnologist 2(4):131-148.
- Redfield, Margaret Park
 1928 Nace un niño en Tepoztlán (A Child is Born in Tepoztlán). Mexican Folkways 4(2):102-108.
- Redfield, Robert
 1930 Tepoztlán, a Mexican Village: A Study of Folk Life. Chicago: University of Chicago Press.
- Sanchez Flores, Guillermo
 1982 Estudio de comunidad: Hueyapan, Puebla. unpublished manuscript.
- Sandstrom, Alan R.
 1991 Corn is Our Blood: Culture and Ethnic Identity in a Contemporary Aztec Indian Village. Norman: University of Oklahoma Press.
- Sandstrom, Alan R. and Pamela Effrein Sandstrom
 1986 Traditional Papermaking and Paper Cult Figures of Mexico. Norman: University of Oklahoma Press.
- Sepúlveda y Herrera, María Teresa
 1973 Petición de lluvias en Ostotempa. Boletín-Instituto Nacional de Antropología e Historia 4:9-20.
- Signorini, Italo
 1982 Patterns of Fright: Multiple Concepts of Susto in a Nahua-Ladino Community of the Sierra de Puebla (Mexico). Ethnology 21(4):313-323.
- Soustelle, Georgette
 1958 Tequila: Un village nahuatl du Mexique oriental. Paris: Institut d'Ethnologie.
- Tuynman-Kret, Martine
 1982 The Development of Health Care in the Process of Modernization: A Sociological Research in the Villages of Chiconcuautla and Cuacuila, Two Rural Societies in the Sierra Norte de Puebla in Mexico. ICA Publication No. 56. Leiden: Instituut voor Culturele Antropologie en Sociologie der Niet-westerse Volken.
- Unidad Regional de Acayucan
 1983 Ciclo de vida de los Nahuas. Cuadernos de Trabajo/Acayucan No. 22. México: Dirección General de Culturas Populares.
- Vexler, Mona Jill
 1981 Chachahuantla, A Blouse-Making Village in Mexico: A Study of the Socio-Economic Roles of Women. Ph.D. dissertation, University of California, Los Angeles.