



TRADITIONAL MEDICINE AND INTELLECTUAL PROPERTY RIGHTS: A PENDING THEME TO RESOLVE IN MEXICO

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ABSTRACT This study highlights the importance of traditional medicine in this century, in poor communities that are far from development and the media. Midwives and practitioners of traditional medicine are the only alternatives for treatment in communities far from technology and development. The traditional knowledge that they have developed from generation to generation is plagiarized, copied and exploited for exploitation purposes. It is necessary to analyze from the ethics of the researcher that the intellectual property of the indigenous peoples must be respected, regulated and protected, so that it is the same community that benefits from the dissemination, sale or patent of their ancestral knowledge.

KEYWORDS : Traditional Knowledge, Medicinal Plants, Native Group, Traditional Doctors, Property Protection, Meedwife.

INTRODUCTION

This study is divided into three sections: The first section analyzes phenomena from the “emic” perspective: It focuses on pondering the importance of acknowledging traditional medicine, phenomenological aspect of the case of study, seen from a historical perspective, from the standpoint of traditional physicians or healers dedicated to heal or treat diseases, also known in America as: Traditional doctors; further, from this “emic” matrix, speeches from patients recurring to traditional medicine to manage their health, are analyzed. The second section corresponds to studying the phenomenon of traditional medicine from the “etic” perspective. It centers its attention to the reflections of the researcher regarding the case study. Finally, the third and last section includes a reflection involving ethical aspects emphasizing on problems from health care providers, researchers, and institutions to disseminate knowledge generated at universities and spread it for the benefit of the community members.

I. - Traditional medicine from an “emic” aspect.

The concepts “emic” and “etic” were originally proposed by Kenneth Pike in 1967: (1), referring to a linguistic relationship between a) Phonemics and b) Phonetics, were a) Phonemics is the process of interpretation made by a subject of the phenomenon, and b) Phonetics, the sound itself. This proposal was applied to Social Anthropology studies, the role of emic and etic, anthropological theory applied by Marvin Harris in 1980 (2).

Harris divides and addresses two fundamental methodological aspects in studies of human behavior: 1) The knowledge and cosmovision of native communities regarding a specific phenomenon to be studied, which was described by Marvin Harris as: (2) “emic” and another relevant aspect in research, that undergoes the subjectivity of the researcher obtaining their own conclusions based on testimonies, historical analyses, ideological, economic, of parental structures, of cultural aspects, and structural from social processes. Accounting information and building “the data” from that information, generates another type of knowledge, which was described by Marvin Harris as “etic”, this information mandatorily undergo researchers filters.

Malinowski proposed and applied the concepts “emic” and “etic” to define different means to focus or center the attention given to a phenomenon to be studied in Anthropology (3). The potential of information and knowledge as a consequence of the practical use of herbal medicine, traditional medicine, and the development of healing practices around the world, are undeniable. As a result from this empirical knowledge, from observation, practice and research based on trial and error, decades and hundreds of years of expertise, are the cornerstone, to fulfill the treatment of different diseases affecting human groups and based on different evidence has achieved the acknowledgement of benefits and damage from the use of certain medicinal plants for the treatment of some disease. The treatments transmitted from one generation to another by traditional healers and midwives, including pharmaceuticals and pharmacists interested in

ethno-medical studies, have served to redirect researches that lie open on the development of pharmaceutical patents in the hands of expert technologists, generating with these patents an important financial benefit.

The WHO defines traditional medicine as: “The sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, **whether explicable or not**, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses” (4). It is considered that clarifying that they are explicable or not depends on how much the researcher has deepened in a specific culture

The XXI century, marked by globalization and the relative rupture of barriers where the era of information has crucially marked this century; existent evidence from successful researches were involvement of traditional medicine and biotechnological development are merged generating encouraging results for providing health care, treatment to diseases or preventive treatment such as the case of the first contraceptive pill derived from the barbasco root, which functioned as a natural contraceptive for many decades and was exploited by the pharmaceutical industry, while designing other types of contraceptives in the laboratory. This topic will be addressed in the third section of the study (5).

Figure 1. Barbasco, plant whose root was exploited with the use of contraceptive. This plant generates several guides from a base similar to a tortoise shell.



Plant whose root was exploited with the use of contraceptive. This plant generates several guides from a base similar to a tortoise shell.

Mexico is a country with an extensive territory (5 120 679 km²), occupying the eleventh place worldwide for its extension. It is assembled by 32 states and one of the main characteristics that could define this country could be multiculturalism, where linguistic, ethnic, musical, traditional, and customs diversity is wide. Mexico can also be considered a place of development in major cities and poverty and extreme poverty in rural and native areas. Unemployment reaches

40.5% and poverty comprises 36.2% of the Mexican population (6). Considering the mosaic conformed by this country, it can be understood that most healthcare in rural and native or indigenous areas relies on the institutionalized care of the hegemonic medicine (7) and this is not sufficient for solving most healthcare problems. Reason for which high costs associated with medical treatments, self-care, and traditional medicine form a triad attending health issues of the underserved groups of the country.

The experience and cultural heritage obtained during generations of healers and midwives, and the knowledge regarding medicinal plants usage (10), are the foundation to acknowledge that due to the effectivity of those practices and their success in the recovery of the sick, these skills subsist despite current technological advances, which approaches main cities, although the access to high technology equipment is exclusively available to individuals who can afford these high cost services.

Figure 2. Midwife Alicia Perez. Midwife for over 30 years in the community Nahua de Zongolica, Veracruz, Mexico.



Most of the population address their health problems combining allopathic medicine and complementary or traditional medicine (10). It is known that the role and importance of the healers and midwives within a community, include fees that are paid not only with coins or bills, but with animals or another kind. They take care of physical and spiritual diseases.

The use of healing therapies varies from one place to another and are reinforced with massages, cataplasms, infusions, prayers, syrups, oils, medicinal herb preparations, resins, roots, leaves, flowers, alcohol ointments, traditional steam baths (temazcal), or sauna; they “cure frightens or scares”: “The healer oppresses the affected area using both hands, yells their name to the child in the upper area of the head to bring back their soul” (9), these are therapies that are performed all around the country and have even crossed barriers between countries and within the American continent. The man’s necessity to be evaluated in a comprehensive manner: body, soul, mind, and feelings, has kept this practice alive over time.

Figure 3: Juanita Shalamiwa, herbal midwife. Expert in therapeutics and diagnosis (“mantedora”) and bone healer (“huesera”). More than 30 years of expertise.



A global assessment of the value of traditional medicine is unnecessary because its permanence throughout the time has demonstrated its effectiveness. Men and women perform their healing labor indistinctly; there are midwives who “cure frightens or scares” and are denominated in Mexico as “herbal healers”, there are also “traditional physicians” that exclusively focus on pregnancy care or childbirth. In Mexico, the convergence of various curative specialties can be found in one individual; thus, methodologically, specialties have been divided in order to be able to identify functions, therapies, and a particular profile in each of them, although it is convenient to clarify that just like the midwife in figure 4, a practitioner of traditional medicine can have one or many specialties.

In Mexico, midwives and traditional physicians/healers provide The empirical understanding that healers (herbal healers, traditional physicians/ healers) have of healing practices such as: infusions, cataplasms, syrups, ointments, oils. Hallucinogens: mushrooms, peyote, cannabis, etc. Intake of dissected animals: such as dried and grinded vipers, skunk organs or other dissected insects, utilized as therapeutic products. The use of steam baths inside a temazcal or sauna. Prayers and rituals.

The native midwives or the traditional physicians are committed with patients and walk for hours to assist with a delivery, to assist a child with respiratory distress, they heal broken bones or provide support for patients with terminal stage diseases.

Application of the knowledge of traditional medicine has saved thousands of people around the world due to its high efficacy, in areas where the only assistance available is provided by midwives, traditional physicians or health assistants. (10).

II.- The traditional medicine phenomenon from the “étic” perspective.

A second ethical aspect is intellectual property protection of traditional knowledge and the use of medicinal plants, which is unregulated in Mexico and probably in many Latin American countries. This situation creates an imbalance of benefits in favor of the researcher, pharmaceutical industries, and/or individuals who diffuse or exploit this knowledge as their own, and that belongs to the ethnical or native group.

The acquired knowledge of midwives and traditional healers has been inherited by families or friendships who teach the healing virtue. Midwife Alicia Perez Rivera, former president of the group of traditional midwives named: Macehual *Ixtlamachilstli*, in the city Zongolica Veracruz was interviewed:

Interviewer: Mrs. Alicia: How do you acknowledge someone's capacity to heal or become a midwife, is that known or discovered?

Mrs. Alicia: “I will explain this, there are three ways:

One: It is common to have a revelation during a dream or the assignment to begin the healing process. A person cannot refuse “the gift” because something terrible could happen, “the gift, is accepted because God chose that person for a reason and it is His will that this person works helping Him”.

Two: Sometimes a person is close to someone who can heal: the mother, father or a relative or male or female friend and begins to teach them because they have realized that this person has a healing gift. If the person likes it, they will begin to heal with someone's assistance and then by themselves, until confidence is gained and they have assisted a delivery or healed with the herbs they acknowledge.

Three: There are occasions when God makes someone a favor and the person asks for a signal in order to show gratitude for the wellbeing brought. Everything went well. People heard and they would come looking for me to assist childbirths. Since then, until present, when I am 75 years old, they still come asking for my help. I was only 13 years old and childbirth women would look for me.

Mr. Isauro, healer and traditional physician, has more than thirty-five years of experience. He assists Tuesdays and Thursdays in the municipality of Zongolica Veracruz in Mexico. He combines prayers with healing remedies based on medicinal herbs, cataplasms, teas, syrups, dissected and grinded animals, baths, and massages. The demand for his service is high. The cost varies between 20 and 40

Mexican pesos, approximately 1 or 2 American dollars per appointment. He assists men, women, and children. He is renowned in the community because he is also a Human Rights representative. Mr. Isauro is solicited by women who have not achieved pregnancy and he, throughout his traditional medicine treatments, enables pregnancy after few months of assistance.

Mrs. Cristina: "I have been a midwife over 30 years, I heal children from frightens: there is a disease that makes children pale and they stop eating and lose weight. That means they are scared: maybe someone frightened them, they felt from the bed or a dog barked at them and the child is scared and we should clean them because otherwise they will worsen or probably die."

The mother calls us and with a bath using pirul, basil, and rosemary leaves we bathe the child, we dry them and when he is warm, inside his bed, I yell at them three times, loud, by his name, above their heads and their soul returns. I yell at them three times, like this: "Pedroo, Pedroo, Pedroo, come here!"

Afterwards, the child cries and begins to recover, starts eating again, they play again, and they are healed. I also cure tummy pain, worms or parasites, through "symbolic cleans" and massages, and I cure the evil eye, indeed sometimes people can have a heavy look and when they look at the child, they sicken them and make them ill. The child presents with fever, vomit, and stops eating. I clean the evil eye caused by someone and I heal them. I also perform Xochitlallis, we give: flowers for the earth". The Xochitlalli is an antique celebration in the region that means: Flowers for the earth, we ask mother earth to help us cure them, to give us strength to help them, to make the child thrive" (11).

In Mexico, midwives and traditional healers provide healthcare to families with scarce resources living in remote communities, where roads are inexistent and they walk for hours to assist with a delivery, a child with respiratory disease, or provide support for patients with terminal stage diseases.

It is very important to highlight that the tasks performed by healers and midwives represent a community job, to help members of their communities, understanding that those "gifts" were provided to help people and not for their personal benefit. They are constantly training and along health promoters, they are now in charge of follow-ups and informing hospitals about risky childbirths that should be assisted in tertiary/referral institutions.

A midwife of the community named Agustina said:

"I heal the diseases of men and women areas".

Interviewer: Do you mean sexually transmitted diseases?

Agustina: Yes. There are women that have odorous runoffs. And men whose genitalia are covered with rash.

Interviewer: How do you heal them, Mrs. Agustina, do you prescribe them medicine or preparations that you acknowledge?

Agustina: No, I cure them with hot plant-based cataplasms. Herbs include: pirul, rosemary, basil, and castor oil, which combined, help to reduce inflammation.

Some people get better, some do not. There are very ill people who die.

Interviewer: Is it too invasive to apply a filling with hot herbs on the genitalia, does people get burn or complain of hurting?

Agustina: Sometimes injuries are more painful. There are men who secrete odorous liquid with pus. After the healing, the next time they come back, they are calmer.

With this testimony, what I intend is to highlight that traditional physicians, healers or midwives require continuous training and their knowledge conjoined with allopathic medicine, will surely benefit the entire population.

It is true that traditional physicians or healers understand the anti-inflammatory, disinfectant, astringent, and relaxing effects of medicinal herbs, nonetheless, plenty of well-known diseases such as

appendicitis and more recently influenza virus AH1N1, HIV, or Zika, which are relatively new, require specific treatments. These conditions must be recognized in order to train midwives, healers and traditional physicians to acknowledge the referral to a hospital, thus, otherwise, the patient can die.

III. - Strengths and weaknesses among the relationship: Health Institutions, Researchers, Universities, and the Pharmaceutical Companies with the groups of healers, midwives, and community health assistants.

An ethical compromise among Universities, health professionals, and institutions should be achieved to generate dissemination of the scientific knowledge.

1. - Lack of ethical commitment on the dissemination of scientific knowledge represents a weakness.

This wake-up call directed towards the members of academies and scientific communities. The generation of knowledge should be aimed in different directions, vertically, similar to the pattern followed by Universities and health institutions. It has failed to ethically accomplish a process of horizontality of the dissemination of knowledge.

Another example includes the herb known as "saint leaf" or "cuyo" which is used on a daily basis in many states of Mexico. It contains an oncogenic product named "safrol". This knowledge remains under the Academy coffers as part of scientific publications were the most important attribute is the quantity of "published manuscripts" or "papers" and the researcher forgets the ethical commitment of disseminating findings throughout the community.

2. - A viable strength that must be structured. Universities and Health Institutions should identify manners to associate midwives, traditional physicians and healers, which are health professionals, who without a degree and empirically, have acquired a valuable knowledge. They assist population affected by health problems living in remote communities. Some institutions such as the Mexican Institute of Social Security (Instituto Mexicano del Seguro Social "IMSS") have created a work relationship between the health institution and these native professionals (midwives, traditional physicians, community health assistants).

3. - Weakness, Intellectual Property Rights a pending commitment with native communities.

Acquiring knowledge from native communities is an easy and noble task due to the generosity of the midwives, who without any interest in exchange, can teach a student, teacher or pharmaceutical company researcher, interested on searching information, raw materials or case studies. Providing information regarding healing properties of medicinal plants that have been identified as anti-inflammatory or to reduce glucose or hypertension, are topics for which traditional physicians or healers in Mexico are wanted.

Acknowledging this unregistered information, also exploited by third parties with financial purposes is a matter of social injustice. It is necessary to encourage equity and justice among creators and commercializing agents of that Intellectual Property.

Worldwide, there is an interest of disseminating and promoting the knowledge of Intellectual Property throughout the World Intellectual Property Organization (WIPO), however, there is scarcity of binding programs with native communities in Mexico. It is urgent to generate synergies to protect the Intellectual Property of Indigenous or Native Communities. In a globalized world such as the XXI century, it is necessary to balance the scale of justice. In the presence of paucity of information, or poor knowledge about institutions such as WIPO, the legal vacuums have created unique opportunities for unscrupulous people who have taken advantage of native communities with advantageous earnings. Ethical problems accompanying biotechnological development have increased, along with scientists, researchers, and industrial workers interested in identifying: medicinal products, treatments for different diseases, and plants in different maturing stages to obtain reactants. In the American continent it is fundamental to respect creativity in order to follow a fair path towards creation and innovation. It is fair that researchers continue their knowledge path around medicinal products that can benefit human beings, as well as respecting the acquired knowledge throughout the years and decades

of proof tests performed by midwives and traditional physicians/healers, that must be valued, compensated, and protected in this unequal relationships.

CASE STUDY: The present study shows that the knowledge of traditional medicine practitioners has to be widely recognized so that later it is considered intellectual property. Stigma and discrimination for many decades and centuries affect the knowledge they have acquired to learn from their experience.

CONCLUSIONS

In our opinion, it is time now to generate specific structured training programs to teach indigenous peoples, that knowledge is a heritage that has to be patented, in order to avoid abuses of third parties who are the ones who benefit economically from the generosity of the subjects and the communities around the world.

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Project: 20171910 Side effects of the use of drugs and the SIP Project: 20171923 Medical recommendations in the Náhuatl language

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