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Evolving Traditional Medicine in the Urban Amazon

The Amazon is the largest tropical forest in the world, with millions of square miles occupied by diverse ecologies, sizeable urban areas, and cultures that are constantly adapting, modifying their lifeways, and facing modification by others. It is an intricate and multi-faceted site, nothing like the narratives that circulate from the outside, which frame the region as a pristine wilderness where ancient knowledge either flourishes or is disappearing with the onslaught of capitalist expansion.

Funded in part by a Tinker Summer Field Research Grant, I spent June through August 2017 inquiring into the complexities of 'traditional' medicine in urban areas of the Peruvian Amazon. Through observations and interviews with folk healers and their clientele, medical research professionals, and individuals practicing household herbalism, I found that systems of natural medicine are not straightforward or unadulterated, and certainly not rooted in the past.

In Iquitos – the second largest city in the Amazon, home to over half a million people – a large market of medicinal plants and related materials called *Pasaje Paquito* is crowded with vendors organizing their merchandise, healers and residents purchasing products, and tourists browsing novelty items. There is much to see, including whole, unprocessed plants; dried leaves, stems and flowers; bottled and potted resins, oils and perfumes. Items are lined and piled up on shelves and tables, in baskets and bowls, bundled and strung from the ceiling with twine. Giant aloe plants are positioned in rows next to a variety of cactus cuttings for propagation. There are black gobs of spongey honey comb, with bees still swirling in, out and around it.

Many products are commercial, packaged and labeled, like imported Andean plants and supplements of shark cartilage and frog extract. Medicinal materials are dispersed among tourist-friendly trinkets like beaded necklaces and whole, dried piranhas on keychains. Biomedical objects are found here too; packs of birth control pills and individually packaged Tylenol and other over the counter drugs are available at a lower price than one could purchase them in a pharmacy.

Each vendor's stall provides a physical and social space for the exchange of medical information and materials. One can source advice about household use of plants, like a tea that young women are said to drink for birth control, or a love potion that "repels ugly people," one vendor explained. Animal greases are sold for the treatment of blood clots, porcupine quills for epilepsy, and a frog venom called *Kambo* that one woman claims is the cure for her type-two diabetes with just one treatment. There are plant materials that can make one more relaxed, stronger, or propel one into "flight" – that is, some plants contain compounds that facilitate travel through the inner recesses of the mind. A resident demonstrates that in using medicinal plants, it is incorrect to ingest the plant immediately. First one must take in the scent of the herb – he motions a long, deep breath while moving his hands upward toward his head – and then wash one's body with the plant. "That's our way here, it's just better," he asserts.

In Pucallpa, an urban region of about 200,000 residents, there is much talk of *plant diets* – the often-difficult process of ingesting a plant preparation for periods that extend from weeks to months, while the individual rests and pays close attention to the plants' teachings and effects. Plants used in diets are referred to as "master plants," and are particularly powerful, with different mechanisms; some are Piñon Negro, Bobinsana, and Ajo Sacha.

In markets and elsewhere in these cities, one finds signs, flyers and posters taped to storefronts, advertising consultations and appointments for magically-oriented services like readings with tarot cards and coca leaves. To rid one's home or body of illness inflicted with witchcraft, or *brujeria*, one pays to have the malady removed. Herbal powders, perfumes and soaps, like black guinea pig soap – an Andean relic, are used to aid in the removal. Although such practices are often labeled as "superstitious" by Western minds, they are closely connected to ideas of health and illness in these regions. So too are services that provide economic opportunity through magical means. Techniques and products are said to attract more clients for one's business, better negotiations, and more profit.

Many of the same practitioners who advertise and practice services related to magic, also treat conventional, chronic illnesses like arthritis, diabetes, osteoporosis and cancer. One sign reads "we cure all types of disease," listing asthma, chronic pain, fractures and depression, along with categories of illness not encountered in the West, like *susto*, rooted in emotional trauma or spiritual attack, and *evil eye*, a gaze from another that is rooted in envy, which can leave the gazed-upon with illness symptoms.

Witchcraft is somewhat prevalent, as folk healers and many residents do not think of health and illness, or even of life, solely in terms of physical processes. While interviewing a resident of Iquitos regarding household knowledge of plants, the topic came to witchcraft and the man's tin roof began flapping loudly. After yelling at the spirits to "calm down!", he said that we could no longer talk about such things.

Healers draw deeply on the spiritual, magical and psychosomatic origins and treatments of illness. Similar, they do not view plants as purely physical organisms, but reference the "energy" that they produce and can affect energies of illness and human bodies.

One healer, Roger, works with his wife Margarita, who operates as a medical assistant in their jungle-home-turned-clinic. Both in their 50s and of *mestizo* descent – of Peruvian and European origin – they have been hosting patients for 15 years in a small, stilted house. With walls made from a hodgepodge of tarps and sheets, a few small rooms, and a gaggle of chickens and roosters pecking around, Roger has treated over 500 patients, including local Peruvians and Western tourists. He tackles physically-induced illness, drug and alcohol addiction, and witchcraft-related symptoms. "We see a lot of it here," he explains, "there are a lot of vengeful people." While it can take many years for a healer to train in "good magic," it can take mere months to train in dark magic, or witchcraft.

Roger hosts a middle-aged Peruvian patient who has acquired a sudden paralysis of his legs. While the hospital that he visited was unable to provide a diagnosis or treatment, and with awareness that the man has a colleague jealous of his workplace promotion, Roger diagnoses the illness as witchcraft-inflicted. Another patient is a six-year-old child with a set of concerning symptoms, who was also unable to receive diagnosis from the hospital where his family took him. When the hospital attempted a treatment that resulted in a worsening of the boy's symptoms – a sure sign of witchcraft, the boy's family in conjunction with the healer determines that a jealous neighbor has hired a witch to inflict illness.

"His spirit has been seized," Roger explains. He gathers plants, making infusions for the boy to drink, and poultices for plants to seep into the body through the skin. He "cleans" the boy with bunches of plants, sweeping gently over his limbs while singing songs that work on the non-physical level of the illness. "When you have a leaf, you hit it against the body of a person, and it takes out the illness," he describes. He also attempts to draw the immaterial form of the illness out of the boy's body by creating slurping sounds in the area around the body. With this, the spirit of this plant is "taking away the evil" that caused harm.

Scientific cultures tackle traditional medicine in the Amazon too, with plants and practices usually devoid of their magical and spiritual components. At times, plants with magical folk uses are even deemed toxic.

In Iquitos, research scientists at the Institute for Traditional Medicine (IMET) work rigorously to examine the physical, active compounds of Amazonian plants. Just off of a busy roadway crammed with motorcyclists and taxis, the center is a quiet, one-story brick building painted blue and white. Chemists, biologists and engineers are designing clinical trials for future drug development – mainly the early stages that include chemical analysis and toxicology testing to understand whether a particular plant is safe for consumption, and at what dosage it is most effective.

Founded in 2008 with funding from EsSalud – one of several national health care plans, which provides services to about twenty percent of the population in urban areas of Peru – the organization has looked at plants that could treat and prevent both type-two diabetes and high cholesterol levels. One such project was demonstrating that oil from the Sacha Inchi tree could lower cholesterol, and the center patented a product called IMTRA Nutraceite Omega 3.

Knowledge of which medicinal plants to analyze from a jungle that holds innumerable species is said to come from traditional healers in past decades. Researchers explained that while in the 1980s and 90s the scientific enterprise worked alongside anthropologists to collect medicinal plants in the field, their current focus today is the chemical analysis of these plants' compounds and corresponding mechanisms, in order to, as they say, "validate the folk knowledge." They ask, what illnesses do particular compounds address, and how?

Knowledge from healers without such scientific validation "does not have enough credibility to be considered as a treatment...say, in a hospital," as one researcher put it. Yet, drawing on traditional or folk knowledge of plants, and translating this knowledge into a scientific framework is an effort to "link traditional medicine to official medicine."

Ideas of scientific validation are tied to, as one engineer described, "problems with the market itself." Those selling plants in either wholesale or retail marketplaces can exaggerate, fabricate, or unintentionally pass along inaccurate information about plants' uses. This sentiment was echoed by a tour guide who lives near the large medicinal plant market in Iquitos. He says of some vendors, "they lie." They may change labels on prepackaged products, or adulterate products. One resident said that frog venom used to treat chronic illness, which is yellow in color, is often mixed with egg yolk to increase the amount of the product.

Although scientific research often strips traditional medicines of its non-physical constituents, Peruvian physicians and researchers do in fact grapple with non-physical logics of medicine. The founder of IMET – where investigators wear lab coats and peer at chemicals through microscopes – has spoken of "quantum healing," or the notion that curing illness occurs at a level of reality that is smaller than, or beyond, matter. Is this the level of "energy" that folk healers speak of? And just as biomedical workers wrestle with ideas outside of their logic, Roger – the healer who works out of his home in the rain forest – is not opposed to the use of Tylenol for pain in dire situations, and will sing a spiritual song into the bottle of pills before administering them to a patient.

The contexts of approaching and practicing traditional medicine are many, and numerous questions arise. How will healers continue to adapt their 'traditional' techniques as modernization moves swiftly along? What becomes of the healing potential of a plant when it's translated into a pharmaceutical-grade drug? What gives a medicinal compound or practice legitimacy, and who gets to decide?