

**The Influence of Medicinal Plants on the Spiritism,
Religion, and Science of Tulear, Madagascar**

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Abstract

Medicinal plants are polyvalent remedies used in industry and medicine. They have curative and preventative powers when used internally and externally on humans. They are also used for agricultural and veterinary purposes. They are necessary to the human body to give health and strength. Medicinal plants influence spiritism, religion, and science. These three worldviews make value judgments regarding medicinal plants. This study determines some limits and interdependencies of each worldview by looking at how they are influenced by medicinal plants in Tulear, Madagascar.

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Introduction

Madagascar has a reputation for its biodiversity. This fact has attracted the attention of the international community and it demonstrates the influence of nature on human beings. Medicinal plants highlight the relationship between biodiversity and cultural diversity. For these reasons this study discusses the influence of medicinal plants on the spiritism, religion, and science of Tulear, Madagascar.

Medicinal plants are used for curative purpose. They are used to treat disease and promote good health. Medicinal plants are a part of pharmacopoeia which is made up of elements of plants, animals, and minerals. The natural phenomenon of medicinal plants creates cultural variation through a process of co-evolution. This cultural variation means the knowledge, experience, and thinking of humans. This study intends to discover the phenomenon which asserts the permanence of this influence. To clarify this hypothesis, usage and deviations will be analyzed.

This study required the adaptation of an interdisciplinary methodology because certain circumstances demanded different methods. This approach allowed for multiple points of view. The principle method was observation. This was often combined with participation. This search demanded objective rigor but also a degree of flexibility because of the involvement of human subjects. The subject matter required a mutual respect for the three mentalities of spiritism, religion; and science and this objective was met through a methodological and precise search.

The usage of medicinal plants has existed as long as humans have had the need to treat disease. Medicinal plants are not used exclusively in one mentality. This study describes the actual use of medicinal plants in Tulear, Madagascar.

Are there realities that precede the use of pharmacopoeia? Data from interviews and publications was confronted on this subject, creating a common reflection that can change our way of viewing the problem.

Methodology

The methodology taken for this study is multidisciplinary. There are two approaches: existential and structuralist. The existential approach is based on what can be known of a phenomenon. The structuralist approach tries to understand the totality of a phenomenon. The data for these two approaches comes from two sources- written and oral.

The interdisciplinary use of structural and existential approaches permits a comprehension of the world of thinking and structure of Malagasy ideology. This understanding is based on written and oral data and experience.

Written sources consist of written works and articles. Oral sources consist of interviews with doctors, traditional healers, religious people and their leaders, and testimony of the sick and/or their family.

These two approaches permit the study of a natural phenomenon in human experience. The natural phenomenon of medicinal plants, influence the life of humans in the three mentalities of science, religion, and spiritism. This approach studies this natural phenomenon of medicinal plants in all human experience.

The purpose of this study is to discover the connection between these three mentalities. This study seeks the total function of the thinking found in the different human experiences of science, religion, and spiritism.

The approach is existential. The point of depart is the experience or encounter. These encounters involve other people and are subjective. It is impossible to be objective in human relationships due to sentimentalism.

Why is there this subjectivism? It is a result of participatory observation. However, this type of subjectivism is rectified by structuralism and the perception multiple points of view. Used together, these approaches give a perception of the total phenomenon in society, metaphysically, theologically, and scientifically.

This study seeks to clarify what is shocking and refuted by some in the traditional use of medicinal plants. The use of medicinal plants gives signification and harmony to the social order, to suffering, to work, and to the family.

The use of medicinal plants permits social manipulation by traditionalists, by religious people who accept or refuse medicinal plants, and by science. For this reason the structural approach is indispensable. In order to study society it is necessary to use something concrete.

All aspects of a social system have ideological or practical elements, such as beliefs and techniques of production. It is possible to use these elements to manipulate society. They include a factor of domination and a factor of exploitation.

It is possible to study the influence of medicinal plants on the life and thinking of humans in terms of an offer-demand relationship. This implies a value to change and usage and a relation to economics. It is important to remember that these economics are never equal.

Context

This study looks at the influence of the plant kingdom on the life and thinking of humans. The project permits the observation that this influence causes durable development, health, and happiness. Humans perpetuate and can serve this relationship and use it to face and to counter poverty.

This work was done in Madagascar, a country with national politics and many new political programs including the Madagascar Action Plan and a green revolution. This study illustrates the interdependence of humans with the environment.

The influence of medicinal plants on human life and thought is determined in this study. Many varying practices and cultures make up this influence. This creates contacts and collisions between cultures caused by their different indoctrinations.

The study took place in an urban area. Tulear is the capital of the south-west region of Madagascar. The research sought to determine the influence of medicinal plants in the Tulear I district. The study makes certain abstractions regarding the climate, physical geography and socioeconomics of the zone of the project. This study develops certain propositions to create comprehension in the domain of health.

The zone of the project is attributed to the Vezo- one of the eighteen tribal groups in Madagascar. It is a large city where all the tribes are represented and there are visitors from all over the world.

Through the influences of these tribes, Tulear is attached to tradition despite progress and globalization. For this reason, Tulear is an ideal micro-cosmism for this study. Tulear acts as a laboratory for this research. The attachment to tradition that exists in Tulear is causes for suspicion. Certain malignant people can control the curative power of medicinal plants. This suspicion divides the local population.

This study exists to clarify certain things. It tries to debunk certain negative attitudes to produce a mutual comprehension between different social factions.

This study presents that which exists and that which can be applied in any country.

Characteristics of Medicinal Plants

Polyvalent Remedies

There are two types of medicine: curative and preventative. Curative medicine is used to treat a problem that already exists in the body. Preventative medicine is used to prevent

illness. Medicinal plants are a polyvalent remedy used for both purposes. They can be used internally and externally, alone or in combination, or mixed with other agents.

Curative medicine is used both internally and externally. For example, internal curative medicine can be used to treat pneumonia by drinking the leaves of ground cassava mixed with a spoonful of water and a teaspoon of sugar (Descheemaeker 69).

Curative medicine is also used to treat external problems. Burns, wounds, and bites can be treated with the leaves of Lalanda, brushed with oil, and wrapped around the abrasion (Anasthasie). Headaches can be treated by both internal and external curative medicine by drinking water boiled with Ravintsara or by sniffing the grains of Romba (Descheemaeker 48).

Preventative medicine is used to treat several types of problems. It can be used to treat diseases that attack at chance such as a heart attack. Heart attacks can be prevented with plants that treat high blood pressure such as essential oil of garlic taken three times a day in a spoonful of honey, hot milk, or sugar (La Nature).

Preventative medicine is also used to treat problems that occur at certain phases in life such as puberty, pregnancy, and old age. Acne at puberty can be prevented by applying finely chopped onion to the skin (Descheemaeker 9). To prevent the fetus from becoming too large in pregnancy an expectant mother can drink one spoonful of boiled Ahibalala and leaves of Voafotsy three times a day (Descheemaeker 28). Weakness and fatigue in old age can be treated by drinking one glass of boiled Nonoka and Kifafalahy in the morning and evening (Descheemaeker 26).

Preventative medicine is also used to diminish the effects of diseases already in the body. For example, Lalanda or Ahibalala can be boiled and drunk to treat the symptoms of diabetes (Anasthasie).

Propriety

In this inquiry it was found that traditional uses of medicinal plants serve many of the same functions as modern medicine. For instance, many medicinal plants exhibit antiseptic properties.

An antiseptic is a medicine used to deter or prevent the development of harmful microorganisms on the skin. Antiseptics are used to prevent a wound from inflaming or festering.

Both modern medicine and traditional medicine can be used as antiseptics. One difference between these two types of treatment is that medicinal plants used by traditional medicine are alive and organic while modern medicine is synthetic and inorganic.

The skin treated with antiseptics is a living organ. In the cellular environment there are certain conditions that are good or bad, healthy or unhealthy, and helpful or unhelpful for proper functioning and restoration. The active agents in modern medicine do not make this distinction but rather act upon all cells, killing both good and bad microbes. For this reason, recovery and restoration using modern medicine to treat wounds and burns takes longer and causes more scarring than when traditional medicine is used (Anasthasie).

Traditional medicine uses living substances to heal. These substances are made from parts of certain species of plants, such as the leaves, branches, roots, or flowers. These plant parts have the power to facilitate the restoration of proper functioning of the body.

While we cannot explain all the details of the healing power of medicinal plants the data of this inquiry proves that we cannot deny their curative efficacy. We must accept with humility that certain phenomenon are untranslatable yet exist none the less.

It is also important to note that medicinal plants have the highest efficacy when used in combination with a healthy lifestyle. They are most effective on bodies that are natural and organic and when used with the maxim, 'prevention is better than cure.'

Absorbent Properties

Absorption is a natural phenomenon that occurs in plants and is vital to life. Plants use the power of absorption to grow. Humans exploit plants for their absorbent power. The absorption power of plants has certain characteristics, functions, and effects which makes it particularly important in medicine and the food industry.

An absorbent substance is something that produces absorption. It is something that adheres to and retains a liquid by fixing it in its own molecules.

Plants have an extraordinary absorbent power. They are living organisms that absorb the minerals, water, sun, and air of their environment.

Plants function as a catalyst. The process of photosynthesis changes captured sunlight into sugar and this sugar helps the plant make fats, hormones, proteins, starches, vitamins, and other compounds.

The absorbent power of plants plays an important role in the food industry. The food industry exploits certain plants based on their taste and nutritive value. For example coffee is cultivated both for its taste and for caffeine which has a stimulating effect on the body.

The absorbent property of plants varies based on the plant's molecular structure. Each species uses and creates different substances. This specificity is created through a process of co-evolution between the plant and its environment. The specialization and particularities give each medicinal plant its unique healing power.

These characteristics necessitate the continuous search by humans for the curative properties of plants. Each part of the plant can have unique curative powers when used internally or externally.

The absorbent power of plants is also used to soak up and neutralize odors and absorb germs. This effect assists the natural defense mechanisms of the body in fighting infections due to wounds, bites, and burns (Anasthasie).

The absorbent power of plants allows them to absorb mobile agents from liquids. This power is exploited in industry and specifically in health to absorb harmful agents from the organs of the human body. This power can be advanced by certain medicines. For example, Cotrim can be used to speed-up recovery from burns when used at the end of treatment (Anasthasie).

Adsorbent Properties

There are certain substances that are insoluble by water. The adsorbent property of substances can render these insoluble substances soluble. This reaction occurs between plants and substances that are harmful to the human body. This adsorbent power of plants has a certain character, function, and effect when used in medicine and the food industry.

An adsorbent substance is a substance that produces an adsorption. It is something that retains liquids, dissolutions, or gases to its surface. This property is used to dissolve a liquid, gas, or solid that is not dissolvable by water alone.

The adsorbent power of plants is used to dissolve lipids, minerals, and gases in the human body. These insoluble substances can be harmful to the human body and damage or devastate the proper functioning of organs. The adsorbent power of plants attacks these substances and renders them soluble and harmless.

Medicinal plants dissolve substances harmful to the human body, notably for the heart, kidney, and prostate. For example a tea made from the roots of *Tsilotelorirana* and drunk three times a day can treat the kidney and prostate. For the heart, a tablespoon of boiled *Sakatavilotra* can be taken in the morning and evening (Descheemaeker 73)

Medicinal plants are also used to create specific taste in the food industry. For example, *Katrafay dobo* is used to create a sour taste in the brewing of beer.

Insoluble substances can exist in areas of the body that are difficult to reach. The use of medicinal plants can substitute the need for surgical intervention in these areas and eliminate the cost and risk of surgery.

In the food industry, the taste of a food product affects the choices and habits of a society regarding its consumption. The food industry must be aware of the tolerance of the human body to certain insoluble substances. It is necessary for producers of food products to adhere to certain standards to protect the health of society. For example, food producers often label their products with warnings or precautions regarding the levels of certain substances in the food.

Usage of Medicinal Plants

Internal and External Usage

A medicine is a substance or mixes of substances used to treat or heal. When abused, medicine is also capable of altering or destroying vital functions. Medicine can be classified by its composition (simple or complex) and by its method of use (internal or external).

Medicine for internal use is made from medicinal plants by mixing plants or parts of plants and creating an infusion or decoction. Internal medicine can be taken through inhalation of scents, either of essential oils, smoke or via friction. Powders can also be used by grinding parts of plants and ingesting them orally, often mixed with another substance. Examples of simple powders are Tambio and Sanatsy used to treat Hevo in children (Anasthasie). Complex powders are also used, such as a mixture of Miandramiondrika, Ahibahiny, Kimalahogasy and salt used to treat teeth problems (Descheemaeker 21). Saps and juices of plants are also used for internal use. Coughs can be treated by drinking lemon juice (Anasthasie).

One can group the large number of external medicines based on their passing or lasting application. Lotions are passing medications made from medicinal plants used to wash parts of the body or the whole body. For example, syphilis can be treated by bathing in boiled Hazomafaika (Desheemaeker 71). Lasting usage of external medicines includes the use of ointments which are made by mixing medicinal plants with lard or fat. For example, a balm made from the essential oil of Balsam can be used to treat strains. Poultices are another type of lasting application made by mixing medicinal plants with a small amount of water. A poultice made from bamboo can be used to treat broken bones when applied like a plaster and left on the skin. Finally, bandages are used to cover a part of the body. Banana leaves, Lalandra, and Bobabe can be wrapped around the body and secured with cotton ties to treat burns (Anasthasie).

While this classification is artificial, it corresponds to the actual use of medicinal plants by those who use them. One restriction of this classification is that it fails to distinguish between medicine taken on the skin and medicine taken under the skin. Generally, medicinal plants used by traditional practitioners do not use medicinal plants under the skin and this is limited to modern usage.

Precision of Usage

Precision of usage and vigilance of employment are important when using medicinal plants. Certain precautions must be considered when using medicinal plants both internally and externally.

It is necessary to consider certain things when using medicinal plants externally. In order to use a medicinal plant, certain preparations must be made. Certain plants can be used fresh or dried. The sun or an alternative source of solar energy is used to dry a plant. Dried Bokabe can be used to treat tumors when mixed with oil and applied over the tumor with

leaves of Lalanda. Charcoal can be made from banana skins and used in a paste to treat difficult wounds. (Anasthasie)

It is also necessary to consider the temperature of the plant in external application. Medicinal plants can be applied hot, cold, or at room temperature. For example, the leaves of Lalanda can be heated briefly to make them more flexible when applying them to burns or wounds (Anasthasie).

When heating a plant it is necessary to consider the heat of the flame. Medicinal plants use photosynthesis to make sugar and this sugar is used to make vitamins, minerals, and other proteins. All the substances of a plant are needed for revitalization. Extreme heat can denature proteins and damage the healing properties of the plant. However, heat is often necessary to activate certain elements of the plant. For example, paste made from Ramy that is heated over a fire can be used in the cavities of sick teeth.

It is necessary to consider these precautions in preparation to make sure that the plant is effective. This is also necessary to avoid other complications, such as foreign bacteria on the plants.

All curative interventions create a reaction. Preparations are taken to allow the immediate action of the medicinal plant. Certain preparations change the reaction caused by the plant. For example, coffee has no toxic effect in its natural state but after processing it becomes an irritant to the digestive system, urinary tract, and pancreas.

Certain precautions need to be taken to obtain appropriate results with internal use of medicinal plants. Most notably, it is necessary to have a minimum of confidence and a good amount of perseverance in the treatment.

This necessity is derived from observations of the use of medicinal plants. Directions on how to achieve the correct precision of usage is developed throughout this study, but confidence and perseverance are the fundamental bases of treatment.

Personal experience serves as the base of this observation. At the beginning of this study the traditional use of medicinal plants was new and unfamiliar to the author. The research created an understanding of the use of medicinal plants in Tulear.

Usually the method of application is effective and simple. There are also complex examples, such as plants used in combination with Fane seeds used for sikidy or divination by traditional healers. In these cases a specialized knowledge is necessary to interpret the treatment.

Medicinal plants work on living organs. Certain precautions are necessary to protect the body. While most medicinal plants can be used without danger, some can act as poisons if taken in high dosages. Toxicity can have serious consequences and cause death.

Agricultural Usage

Medicinal plants are used in agriculture to meet the needs of farmers to counter certain difficulties and yield a maximum harvest. Medicinal plants can serve the same role as chemical products without the negative effects. The character, function, and effects of medicinal plants used in agriculture describe how medicinal plants serve this purpose.

It is possible to use medicinal plants in agriculture. This possibility alleviates the need to use chemical products. For example, allspice is used to protect harvested rice from insects by adding one kapoaka (390g) to a 100kg sack of rice. The use of medicinal plants as opposed to chemical alternatives does not pollute the environment or the crops because medicinal plants are soluble and organic. Furthermore, medicinal plants yield soil that retains water and nutrients and protects the ecosystem.

Medicinal plants fertilize the soil and increase crop yield. For example, both legumes such as Tephrosia and Crotalaires and elephant grass are used to fertilize the soil.

Medicinal plants are also used to protect the health of plants, such as against parasites. Neem can be used as a natural insecticide. The fruits of Voamaintilany or the roots of Lombiro can be used as natural rodenticides.

The use of medicinal plants as opposed to chemical products yields a crop that is healthy, biological, and natural. When used, chemical products are absorbed by the plant and ingested by the animals or people that eat them and cause health problems.

Medicinal plants are also a safe and local alternative to chemical products. Chemical products are dangerous to the health of those who handle and produce them. This can be especially dangerous if there is a lack of training and equipment needed for safe use.

The use of medicinal plants in agriculture cannot eliminate the use of chemical products but can lessen the need for their use by replenishing the soil with organic matter. The use of medicinal plants does not cause problems for the country, farmer, or consumer such as those that arise from using chemical poisons.

Veterinary Usage

Animals need and use medicinal plants to protect and cure their health. Medicinal plants are used by both domestic and wild animals. Medicinal plants are also exploited to care for livestock and are used in the meat industry.

Evidence suggests that animals use medicinal plants both externally and internally. Wild animals used medicinal plants to treat health problems. Certain lemur species search for plants that have anesthetic and anti-scarring properties. They chew these plants and apply them to treat their wounds.

Medicinal plants are used by domesticated animals. Dogs and cats eat certain plants to regulate their digestive systems and to treat worms. Poultry eat the fruits of Roetra to expel worms from their intestines.

Medicinal plants are also used on livestock to increase the profitability of the animals. Medicinal plants are used to improve the taste, quality, and quantity of the meat.

Medicinal plants are used to create resistance against illness and against certain climates. Medicinal plants assist animals in resisting disease and unfavorable climate conditions such as harsh cold.

Medicinal plants are also used to treat parasites. They can be used on animals both internally and externally for this purpose.

There are many examples of plants used for these purposes. Taritarka is used to improve the taste of meat. Piment is used to help animals resist disease. Taimborotsiloza is used to treat parasites.

Medicinal plants can be used in combination with other pharmacopeia. For example, cows can be fed Trakambazimba and salt to treat worms (Desheemaeker 9).

Influence of Medicinal Plants

Medicinal Plants Give Health and Strength

Medicinal plants profoundly influence the human body. Taken as both food and medicine, medicinal plants give health and strength. How and why do medicinal plants influence the body and what is the consequence of this influence?

The use of medicinal plants gives strength to the human body by aiding the organs in transforming ingested nutrition into energy. This energy is metabolized to sustain the life of all the cells in the body and to grow new cells.

Medicinal plants also contribute to the revitalization of the human body. Medicinal plants aide the human organism in resorting damaged or diseased cells or tissues and in maintaining homeostasis and a balanced equilibrium.

Medicinal plants stimulate certain organs that maintain and create cells. Scientists call this function of the body the 'nutritional function.' The systems of the body that perform this function are the digestive system, intestinal absorption, respiration, circulation and excretion.

Medicinal plants help the human organism sustain the organs that allow humans to interact with their external environment. This is called the 'relation function' and is performed by the skeleton, muscles, nervous system, and senses.

The nutritional and relation functions of the body are associated and work together. Nutrition demands the function of the nervous system, the muscles, the skeleton and the senses for obtaining food. These organs can not function without energy derived from the nutritional organs.

The human body is an indivisible whole that functions in harmony. The harmony of the human organism is maintained by the nervous system and the hormonal glands. The hormonal glands include the thyroid, parathyroid, and hypothalamus. These organs circulate hormones in the blood that assures the correct functioning of the cells in the body.

For satisfying the necessities of the human organism one needs to have certain knowledge of the body and its needs. One needs to know the value of medicinal plants in order to preserve the health of the body. As it is said, "mens sana in corpora sano" (a sound mind in a sound body). Medicinal plants are required for the health and strength of the body and are a necessity of the human core.

Spiritism

Medicinal plants are often associated with spiritism. Spiritism describes natural religions that developed with the first human societies. These societies had a profound sympathy and dependency on nature and a significant knowledge of medicinal plants. Medicinal plants continue to have an influence on spiritism. This inquiry looks at the characteristics, functions, and effects of this influence.

Spiritism is a human experience. This experience is based on the existence of supernatural powers that influence the world and the lives of individuals or communities. While spiritism is universal, these supernatural powers and their related cultures take on different forms in different places and in different individuals.

In Madagascar the three fundamental supernatural powers are: Zanahary, or God the creator; ancestors, or spirits of people who have died but continue to play a part in the lives of the living; and trombas, or spirits that possess individuals. The acknowledgement of these forces is found throughout Madagascar but each person has their own individual relationship with them.

Where do these supernatural powers come from? They come from natural phenomenon that is beyond human explanation. These phenomena are observed and then attributed to supernatural forces and explained by a spiritual worldview. This worldview attributes the phenomenon of nature and the environment to a living spirit. Nature is alive with this spirit similarly to how human beings are spirited.

In order to master the spirit of nature it is necessary to have an intermediary. This intermediary creates a bridge between the supernatural forces and human beings. In the spiritism of Madagascar, the role of intermediary is filled by ombiasy. Ombiasy meet the needs of individuals and societies by working through the power of the divine forces. Not everyone is capable of having a direct relationship with the divine forces. Ombiasy are specialists who use their knowledge and experience with the divine forces on behalf of other people.

Medicinal plants are used in spiritism to create a vertical relationship between the spiritist and the divine forces beyond him or her. This relationship is represented by the horns of the ombiasy, his or her most important possession and source of power. The horns are a work of a lifetime and are filled with medicinal plants based on the orders received from the

spirits. The contents of these horns include powders of plants that represent diverse powers such as wealth, protection, good harvests and fertility.

Medicinal plants are also used by spiritists to maintain the purity of this vertical relationship with the divine forces. Tokazanahary (literally meaning “to call upon Zanahary”) is used to purify the ombiasy in preparation for certain rituals. It includes a black charcoal and white clay that are rubbed on the wrists, hands, forehead, mouth and head before handling the horns.

Medicinal plants are used to evoke the power of the spirits. Ramy is a plant burned as incense to evoke the spirit when the ombiasy seeks information or authorization. Fane seeds are also used in the art of divination known as sikidy. The Fane seeds are distributed in certain patterns and used with specific plants to evoke their spiritual power. For example, sikidy is used with Mpanjakaben’ny Tany to make someone more powerful.

Medicinal plants are also used in conjunction with taboos to maintain a favorable relationship with the spirits and divine forces. Medicinal plants can be used to lift taboos if someone needs care on a day that is taboo to work. Tokazanahary can be used to purify the ombiasy so that no one needs to be turned away.

Since not everyone is capable of becoming a spiritist, the general population depends on them to meet their needs for healing and protection. Medicinal plants play an important role in this horizontal relationship between spiritist and populace by acting as a medium between the power of the spiritist and the needs and desires of the population.

Medicinal plants used by ombiasy are classified based on their curative or preventative power. Preventative plants are used to protect the family, self, and environment. Babakimoa can be used to increase one’s riches or Trabady an’ala can be used to prevent a women from losing her baby when she is five or six months pregnant.

Curative plants are used to heal or treat a problem or illness. Voalavo lambo (literally means “rat and wild pig”) is a disease that causes someone to lose their mind but can be treated by medicinal plants. Tsimena can be used to make someone who is shy more powerful. Mangerivorike can be used to cleanse the inner self of danger.

In the worldview of spiritism, unexplained natural phenomenon are attributed to divine powers. Developing a relationship with these divine powers is not easy and takes a considerable amount of effort. Blood, water, color, and scent are used to facilitate a relationship between humans and supernatural forces. The use of these channels can be found in traditions and religions throughout the world. Medicinal plants are used in generating scents. Once established, a favorable and knowledgeable supernatural relationship that is maintained by medicinal plants can be used to alter natural phenomenon.

The use of medicinal plants in spiritism is subjective. Not every plant is suitable for use and selection must be assisted by the supernatural powers. Plants are found in the local terrain or bought from vendors who are also capable of selecting plants based on their spiritual efficacy.

The names of plants used by spiritists also illustrates this subjectivity. Names are given based on what the spiritist uses the plants for. For example, Mpanjakaben’ny Tany literally means “king of the world” and is used to make someone more rich and powerful.

The knowledge of the spiritist represents a profound human perspective of the world. Plants are known not only for their effect on the body but acknowledged for their symbolic and spiritual powers as well. This knowledge is used to create harmony within individuals and human societies and their environments.

Religion

Before the arrival of modern religion in Madagascar, medicinal plants had a profound influence on traditional beliefs and religion. Do medicinal plants have an effect on modern

religion as well? This inquiry explores the effects of medicinal plants in Tulear looking at their influence on the character, function and effect of religion.

Monotheistic religion is a human experience based around the belief in the existence of God and in humans' dependence upon him. Monotheism is a belief in one divine power only. This is a trait shared by Judaism, Christianity, and Islam.

Religion is characterized by the forms and words that belief in God is expressed. These three monotheistic religions are revealed religions based on the written records of the truth as spoken by God and his prophets.

Christianity is the religion based on the laws and teachings of Jesus as recorded in the Bible. Jesus acts as an intermediary between humans and God. He is known to Christians as the savior of humankind because he makes a saving relationship between God and humanity possible.

Being a Christian means believing in the truth as taught by Jesus. This truth is interpreted differently by many Christian communities and individuals. However, there are certain restrictions that separate Christianity from traditional beliefs. These restrictions derive from a rejection of all divine forces other than the one God. Belief in the spirit of nature or in ancestors is false and regarded as hethenistic. Nature is reclassified as a creation of the one God rather than having its own divine force.

Christianity can be viewed as a critique of spiritism and traditionalism. It strips the healing agents in traditional practice of their supernatural power and efficacy. Healing is reclassified as a power or grace of God. However, knowledge of medicinal plants in Tulear is traditionally associated with traditional beliefs and practices. This situation causes medicinal plants to divide the Christian worldview regarding their position on the use of medicinal plants.

Some Christians reject medicinal plants categorically with sacrilegious traditional behaviors and custom. The healing power of medicinal plants on the body is not differentiated from their spiritual associations. The pastor at the Jesosy Mamonjy Church in Tulear forbids his community from consulting traditional healers and using medicinal plants. The community is encouraged to pray for healing as a gift of God and consult a medical doctor as a supplement to prayer.

Other religious communities make a distinction between the corporal and symbolic use of medicinal plants. The corporal efficacy of medicinal plants is not refused but plants used for their spiritual or symbolic power is renounced as superstitious. Considering a plant to have a divine power or force that originates from the traditional worldview is heretical, as is consulting spiritists who use medicinal plants for malicious purposes.

The divisions in attitude regarding medicinal plants are not clearly drawn. There are individuals who accept both the role of the spiritist and of religion without obliging the need for a value judgment. To others, this is an impossible duality and the cognitive dissonance is resolved by rejection of medicinal plants along with traditional practices. Some consider certain uses of medicinal plants superstitious but continue to fear the power and influence of ombiasy.

Complete rejection of medicinal plants demonstrates an ignorance or rejection of the knowledge that modern medicine harnesses the same healing power as medicinal plants. Modern medicine transforms the appearance and form of the curative power of plants, but not the function.

The curative power of medicinal plants is categorically rejected despite affirmative evidence in the Bible. In Luke 10:34 Jesus describes how the Good Samaritan uses olive oil, wine, and bandages to treat the wounds of a man. Jesus encourages his disciples to “do the same” (Luke 10:37). Sirache 38:4-6 advises us to not hesitate to use medicines from the earth

because God has created them and given humans medical knowledge to that He can be praised for his miracles.

Medicinal plants are also used in the Bible for their symbolic power. In Matthew 2:11 Jesus is presented with a gift of myrrh upon his birth. Myrrh is incense still used in Christian rituals.

There is also evidence of the purifying power of medicinal plants in the Bible. In Leviticus 14:2-7, God instructs Moses on how to purify someone with a skin disease using a piece of cedar-wood and a spring of hyssop. The symbolic use of hyssop can be found many passages.

The effect of modern religion on traditional religion is a simplification of the divine forces. While traditional beliefs personify the forces of nature, Christianity classifies nature as a creation of God. Nature is revered as testimony of God's existence but not accepted as having its own divine power. This initiates the secularization of natural phenomenon. The three divine forces in traditional beliefs are reduced to a single principle of God.

This restriction limits the use of medicinal plants in Tulear. Medicinal plants are necessary for strength and health and religion offers no equivalent alternative. As a result, religion is in competition with traditional practices and can not accept the successes of the traditional healer. Some Christians who do seek the assistance of an ombiasy or traditional healer do so stealthily in the night (Randriameia).

Modern religion's critique of natural religion acts as a mechanism of destruction against medicinal plants. Modern religion critiques and rejects the culture that sustains knowledge of medicinal plants. This forces the needs for an alternative solution to meet the health needs to the population. This function is often filled by modern science.

There are some Christian communities and individuals addressing the problem that religion does not facilitate the transmission of knowledge of medicinal plants. For example,

the book Plantes Médicinales Malgaches was written by a Christian pastor and available in Tulear.

Modern Christianity in Tulear is an imperialism manifested by contemplation and transformation. In traditional religion, nature dominates life. In modern Christianity, it is humans which dominate and master nature. Modern Christian communities view themselves as the guardians of nature but categorically reject a culture that sustains a profound knowledge of nature. This is largely due to the fact that traditional uses of nature are associated with spiteful or narcissistic desires and intentions such as using medicinal plants to seek ill will or harm one's enemy.

This rejection of traditional belief commences a process of secularization of the world which is further progressed by modern science.

Science

Modern science began in the European Enlightenment with the rejection of the divine teleology of religion and the creation of a new vision of the world based on mechanics, atomism, and empiricism. Today the effects of modern science have reached everywhere on Earth. Modern science led to many developments in medicine and the creation of a worldwide industry in pharmaceuticals. Modern manufactured alternatives have replaced the use of medicinal plants in many societies. Medicinal plants significantly influence modern science and the practice of medicine in Tulear where traditional use of medicinal plants is still widely in practice.

Science is a knowledge of principles and the causes of natural phenomenon. It is arrangement of facts in a subject in such a way to show their relation to each other and to those in other subjects. These facts are made from observations of objective phenomenon. Objective phenomenon, exist outside the mind and are therefore real as opposed to subjective.

Science is concerned with what is real and not merely fancied. It seeks to describe things that belong to a fixed property as opposed to personal or moveable properties or appearances.

Science is based on laws. These laws describe the order in which things happen or forces act out. This is found out through observation. Scientific laws are stable and general. Science is not interested in what is individual and indivisible. Nor is it interested in exceptions or phenomenon left out or treated differently than other phenomena that come under the same rule.

Science is the practice of human reason to reach conclusions. This process is based on the systemization of thought. This control of human thought produces a knowledge that is artificial; it is created by human beings. As a result, there is no need for an interpreter for this type of knowledge.

Modern science exploits what it considers utilizable from human knowledge. Technology and industry serve as the catalyst for this exploitation. For example, two industries exist in Madagascar that manufacture essential oils. The extraction of essential oils from medicinal plants is used to obtain the strongest concentration of certain active agents in the plant. Products from Bioaroma and Homeopharma are controlled by international standards and distributed to pharmacies throughout Madagascar.

Technology can also be applied in the artisanal processing of medicinal plants. Artisanal essential oils are also available in Tulear through traditional healers. E. Fitahia has developed a cold-processing system for extracting oils from medicinal plants. He offers consultation and medication to treat diseases such as hypertension, asthma, cancer, diabetes, acne and fatigue.

A large part of modern pharmacopeia is manufactured from medicinal plants. The purple periwinkle is a plant endemic to Madagascar which contains a cure for childhood

leukemia. Scientists continue to research throughout Madagascar in search of the curative properties of plants, often exploiting of the knowledge of traditional healers.

In the creation of modern medicine from medicinal plants, the curative function of the plant is transformed in an artificial process into a non-living product. Modern science isolates a single active agent from the plant and this agent is then manufactured. This process makes available the same medications in pharmacies throughout the world. It also allows for exact control of dosage.

The creation of chemical alternatives to medicinal plants excludes the global properties of the plant. Medicinal plants are more easily absorbed by the body than their chemical alternatives. This means that a higher dosage may be necessary when using modern medicine. This increases the risks of toxicity, secondary effects, and dependency. Medicinal plants can be used in smaller dosages and include all the curative aspects of the plant. They have no secondary effects and do not cause dependencies.

The risks associated with modern medications require high-level restrictions. They are only available in pharmacies and in some countries, only with the prescription of a medical doctor. They must be tested for their toxicity and effectiveness. This uses the lives of many lab animals and puts human subjects at risk.

Certain branches of modern science contest against knowledge without application, knowledge for the sake of knowledge, and knowledge that is absolute or has a universal application. Each phenomenon that science seeks to describe has its own laws that are used to explain its existence. Science is limited in that it must take certain methodological precautions based on this principle of relativity. One can not, for example, use the laws that describe thunder to describe the functioning of a cell. In order to achieve objectivity, relativity must be rendered absolute.

While relativity can explain the unity of a phenomenon, it can not create a unity of mind. Objectivity is analytic, not synthesized. It does not result in integration. Modern science does not integrate other means of knowledge but rejects them. The relativity of modern science takes the place of the absolutes found in traditional beliefs and in modern religion. Nature is viewed as an object and as something to be exploited. The idea that nature has a personified human spirit is absurd and considered a utopian vision.

In rejecting what is absolute, modern science destroys what is absolute. Modern science is in confrontation and conflict with both monotheistic religion and traditional religion. This is because modern scientific worldview believes that traditional beliefs and religion can not explain natural phenomenon because it relies on what is absolute.

This chauvinism secularizes the world and the mind. To achieve objectivity, the scientific researcher must remove themselves from the experiment. The denial of the subjective creates a mechanistic vision of the world and of nature. Human beings are viewed as objective phenomenon. It is impossible for science to understand that any illness that affects a human being steams from all dimensions.

Science cannot satisfy humans' health needs. The use of artificial knowledge and artificial products creates artificial minds and bodies. In contrast, medicinal plants are living organisms like human beings. When used in industry and health, medicinal plants maintain a healthy body and a healthy environment.

Conclusion

Certain realities precede the use of pharmacopeia. These realities vary based on the special and temporal context. This change follows the evolution of human thought in the realms of science, religion, and spiritism. These realms are in competition. This inquiry points to the gap between modernity and tradition and the fight between innovation and preservation.

Natural resources must be managed to create a balance, and to protect the health of humans and the environment. Conservation is necessary for future generations.

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List of Plants

This list offers a selection of plants used in Tulear. Vernacular names are provided in Malagasy or in English. Scientific names are given when available. Direct translations and/or uses are given for plants used by Ombiasy.

Plants used for Agricultural and Veterinary Purposes

Allspice	Tamborotseloza
Crotalaires	Taritarka
Elephant grass	Tephrosia
Lombiro [<i>Cryptostegia madagascariensis</i>]	Trakambazimba
Piment	Voamaintilany [<i>Arbus precatarius</i>]
Rotra	

Plants used in Traditional Medicine

Ahibahiny	Lemon
Ahibalala	Mandravasaroitra [<i>Cinnamomum fragrans</i>]
Balsam	Miandramiondrika
Bamboo	Nonoka
Banana	Onion
Bokabe	Radriaky [<i>Lankana camara Line</i>]
Cassava	Rambiazime [<i>Helichrysum gymnocephalum</i>]
Coffee	Ramy [<i>Canarium madagascariensis</i>]
Girofle [<i>Eugenia caryophyllata</i>]	Ravintsara [<i>Cinnamomum camphora</i>]
Garlic	Romba [<i>Ocimum gratissimum</i>]
Hazomafaika	Sakatavilotra
Katrafay Olikoliky [<i>Ceohelopsis microfoliolata J.F. Leroy</i>]	Sanatsy
Katrafaydobo	Tambio
Kifafalahy	Tsilotelorirana
Kimalahogasy	Voafotsy
Lalanda	

Plants used by Ombiasy

Adabo [lit: big tree]
Ambahitsy
Andrazo [lit: to take away thunder]
Babaky moa [to diversity riches]
Fane seeds [<i>Entada abyssinica</i>]
Hompy [to prevent someone from losing their mind]
Lopingo
Mandabo lahy [lit: to fall down]
Mandafintanampolo [lit: to use two hands]
Mandravasaroitra [lit: destroy difficulty]
Mandrio [to prevent harm from something that wants to kill you]
Mangerivoriky [lit: cleanse inner-self of danger]
Mpanjakaben' ny Tany [lit: king of the world, to make someone rich or powerful]
Ramy [<i>Canarium madagascariensis</i>]
Sagnatry [to protect children]
Tambio [to protect children]

Tambio lahy [prevents bad spirits]
 Taniahy [lit: to grip strongly]
 Tanjahy aminy Tana [lit: something that grips at the hands]
 Toka zanahary [lit: to call for Zanahary]
 Tokantsikily [lit: one sikidy]
 Trabady an'ala
 Vahakily [lit: vaha=roots, roots must be planted near a spring]
 Vahintoky [lit: strong vine]
 Viky [to make the disease exhibit itself so it can be known]

Glossary

Fane seeds – seeds used by Ombiasy in Sikidy, or divination

Kapoaka – a measurement of one container of condensed sweetened milk, 390g

Ombiasy- traditional spiritist and healer

Sikidy – divination performed by Ombiasy with certain plants

Traditional Medicine- medicine that uses medicinal plants to treat and prevent disease

Tromba- spirit that possesses an individual

Zanahary- God the creator