

Reflections on Ayahuasca from a therapeutic perspective¹

DR. JACQUES MABIT², JOSE CAMPOS, JULIO ARCE

ABSTRACT

The water extract from *Banipsteriopsis caapi*, *Psychotria vidris* and *Brugmansia ap.*, a potion generally known in the jungle as Ayahuasca, constitutes the central axis of *curanderismo* (shamanism) throughout the entire Amazon basin, due to its purgative and psychotropic effects. Anthropological, psychological and phytochemical studies demonstrate that, if it is properly administered, it can be advantageously used in the treatment of chemical dependencies and psychopathology. Our studies of Ayahuasca enable us to reach a number of conclusions regarding improvements in its method of preparation. Treatment of patients also indicates that therapeutic sessions are affected not only by the active ingredients (β -carbolines and tryptamines) of Ayahuasca, but also by the psychosomatic condition of the patient, by natural environmental factors, and by other factors controlled by the therapist.

1. THE CONTEXT

Research on traditional medicines in Tarapoto and the surrounding Province of San Martin (Peru) has been carried out since 1986 to evaluate alternative therapies used in traditional indigenous medicine, primarily in the treatment of addiction to cocaine base paste.

From the outset, this required treating empirical medicine with great respect, and considering ourselves ignorant about the subject, as mere students of the healers and shamans.

After an initial phase of establishing local contacts, it rapidly became clear that the potion Ayahuasca was the key to empirical knowledge, and therefore the required route to attempting to understand something about what turned out to be a very complex and elaborate traditional body of knowledge. We accordingly decided to recommence our medical studies in that other university: the jungle.

We focused our attention on Ayahuasca: its preparation, uses and therapeutic results. Learning about its uses also implied surrendering our direct control, accepting auto-experimentation and guidance from the more experienced local healers.

Ayahuasca is a purgative decoction of a mixture of psychotropic plants (*Banipsteriopsis caapi*,

¹ Translated from Spanish. Original publication information is as follows: Mabit, J., Campos, J., Arce, J., Consideraciones acerca del brebaje ayahuasca y perspectivas terapéuticas, Revista Peruana de Neuro-Psiquiatría, Tomo LV, 2, pp. 118-131, Lima, Peru, June 1992.

² Physician, founder of Takiwasi Center.

Psychotria vidris and *Brugmansia sp.*) It is used by indigenous jungle-dwelling groups for both therapeutic and ritual purposes. It is ingested during collective, nocturnal sessions led by a “maestro”.

To date, we have participated in over 300 nocturnal Ayahuasca sessions, which included following the preparatory procedures that the “maestros” required of us, such as diets, isolation in the jungle, fasting, sexual abstinence, learning songs, etc. Finally, we reached the point where we were able to direct therapeutic sessions by ourselves, administering Ayahuasca to others. In total, our research comprised first hand observations of over 2,000 persons under the effects of Ayahuasca.

Several investigators from different disciplines joined together to form a multi-disciplinary group: Prof. Julio ARCE (Phytochemistry-University of Iquitos), Jose CAMPOS (Empirical Ethnobotanist), Lic. Calara CARDENAS (IIP-Anthropology), Lic. Sacha Domenech (Clinical Psychology), Dr. Rosa GIOVE (Biomedical Evaluation), Prof. Fernando CABIESES (Neurophysiology), Juan RUIZ (Forestry Technician-Botanical identification, Iquitos) and Dr. Jacques MABIT (Coordinating Physician).

2. METHODOLOGY AND ITS JUSTIFICATION

Given the peculiarities of the problem, we had to redefine the basic axioms of our research to fit our atypical scientific situation. Acting on the advice of the healer “maestro” specialized in this subject, we decided to explore Ayahuasca *in situ*, under the empirical conditions in which Ayahuasca is administered, and committing ourselves to **systematic auto-experimentation**.

Our decision to proceed in this manner was based on the following premises:

2.1. Defective indirect studies

- 2.1.1. In the large literature on Ayahuasca (we have identified more than 400 titles), less than 10% of the authors were able to self-experiment; therefore, over 90% had to rely on second-hand information.
- 2.1.2. Among the authors that did self-experiment, less than 10% refer to have participated in more than five therapeutic sessions, and none that we know of affirms that they followed the classic steps of apprenticeship (diets, isolation, abstinence, etc.). The “maestros”, meanwhile, continue to insist on the rigorous and indispensable nature of strict rules, as well as on a relatively long apprenticeship, in order to learn and understand anything. The validity of this insistence has been constantly reaffirmed over time and space.

- 2.1.3. The preparation, generically called Ayahuasca, contains those alkaloids perfectly identified, the *β-carboline* and *tryptamine alkaloids*. Nevertheless, alkaloids present in the plants, however, are not present in the brew. Studies made of the pure alkaloids, therefore, cannot reflect the realities of a session, since the potion is not identical to the plants in content.
- 2.1.4. Experiments with pure alkaloids require doses of 300-500 mgms. of alkaloids (*harmine*, *harmaline* or *tetrahydroharmine*) to secure threshold effects (Pennes and Hoch, 1957; Naranjo, 1967), while experiments using the potion prepared by local healers require doses of only 10-30 mgms. of the same alkaloids. This suggests possible synergetic effects in the empirical combination of the potion (McKenna, Johns, Ryall, 1990).
- 2.1.5. Under indigenous conditions of ingestion, the therapist accompanies and guides the patients “from the inside”, becoming attuned to them by taking the brew himself. However, in the few clinical trials undertaken by a small number of modern therapists, they have not ingested the potion themselves, and have thus guided their patients “from outside”; and furthermore, they have used pure alkaloids (Naranjo, 1973).

This clearly indicates that the ethno-anthropological studies, as well as the medico-pharmacological ones, are all lacking a fundamental requirement, i.e., direct observation under natural conditions.

2.2. Validity of the empirical approach

We have found that studying Ayahuasca phenomenology in *situ* is valid for the following reasons:

- 2.2.1. Healers often demonstrate a knowledge of therapeutic methods unprecedented in modern science, methods unexplained, which can nevertheless result in concrete, observable events, subject to scientific understanding:
 - ✓ Field observations show that addicts have been cured by healers or shamans using their therapeutic tools.
 - ✓ The mixture of plants used to make the Ayahuasca brew is an answer to the very precise need to combine *tryptamine-type alkaloids*, orally inactive, with *mono-amine oxidase* inhibitors, such as *β-carboline inhibitors*. These conditions do not occur spontaneously in nature, so

one must assume that the healers have a sharp and effective understanding of the processes. Neither random incidents (Naranjo, 1983) nor observation of animal behavior can account for this remarkable discovery (Siegel, 1989). An amazed D. McKenna wonders "...how these practitioners have drawn the connection between the properties of the *Banisteriopsis* plant and its ability to potentiate and render orally active still other plants containing DMT or other tryptamines" (McKenna, 1990)

- ✓ The "Ayahuasca science" shows an unusual geographic distribution -- throughout most of the Amazon basin as well as over time. Plutarco Naranjo mentions that the oldest known object related to the use of Ayahuasca, is a ceremonial cup, hewn from stone, with ornamental engravings, found in the area of Pastaza culture (Amazonian Ecuador); it is now part of the collection of the Ethnological Museum of the Central University (Quito). This culture spans the period 500 B.C. to 50 A.D. (Naranjo, 1983). Tribes separated from each other by great distances, manifest an intimate knowledge of Ayahuasca use under different names: (*ne'pe', xono, date'm, kamarampi, pilde, natema, yaje', caa-pi, mihi, iona, mii, nixi, pae, etc.*).

Given the pragmatism that characterizes primitive cultures, one cannot imagine such a practice being maintained over so long a time period, and across such an immense area, especially in the face of persistent opposition by Western Christian culture, unless it had a very solid foundation based on empirically demonstrated proven curative effects.

- 2.2.2. We have also found, as previously pointed out (Mabit, 1988), another similarity between traditional knowledge and modern science: they have logical foundations in common, which permits indigenous knowledge to qualify as "science".

Both are based on concrete, observable events (for example, the case of a sick patient who had been treated and cured); both proceed rigorously; both demand results, i.e., the knowledge must "work"; both lean on a coherent body of facts; use a precise, structured methodology; define the conditions that allow experimental verification of observations; and determine a methodology for the transmission of the knowledge.

This empirical knowledge is further revealed to the student as manifestly compatible with the criteria of modern science.

2.3. The attitude of the observer

Pragmatism and common sense tells us that the best way to study any subject is to learn from the specialists, in this case, the shamans or healers.

This requires the observer to abandon prejudices to overcome the inhibitions which a “serious scientist” is generally susceptible to, and to obtain all the means needed to be responsive to the specificities of the subject matter. In this case, one needs above all sufficient time, a personal engagement, and the willingness to suspend for a time any critical or disparaging assumptions opting instead for humility and respect.

In this area, we all face those taboos of the academic community, which have little or nothing to do with scientific progress and arise more from an unconscious fear of directly confronting the unknown. In fact, it is not about stopping at what is “normal” or greater “normalization”, but daring to risk one’s ego in a process of observation which demands personal surrender.

Kabire Fidaali, in his studies of the Bangré in Africa, found these same resistances, and affirmed that “the human ego is not reducible to the normal, which is what differentiates it from scientific origins: the scientific observer is a conception of the normal” (Fidaali, 1991:39).

3. RESULTS

Once we acknowledge that the two different sciences are on an equal footing, and that::

- a) their foundations are compatible even though their procedures and explanatory methodologies differ;
- b) they have common goals (and understanding of nature and of human beings, the development of solutions for the well-being of the community).

Then it become possible to establish a fruitful interchange between them. Here, we offer two examples of mutual data collection and reciprocal enrichment.:

3.1. From traditional knowledge to modern science

The Ayahuasca brew takes its name from the Ayahuasca plant (*Banisteriopsis caapi*), which assumes a central role in both the brew and in the therapeutic ritual. According to the “maestros”, the *malpighinaceous* vine Ayahuasca is always the most important ingredient in the botanic mixture (which varies according to each healer and geographic area. It is Ayahuasca which teaches through visions, which allows “seeing”, which concentrates the greatest

hallucinogenic effects.

However, until recently, chemists and pharmacologists insisted that the dimethyltryptamine (DMT) contained in *Psychotria vidris* (chacruna) was the main hallucinogen in the mixture, the ingredient that provided the visions, while the *Banisteriopsis* acted only as an MAO inhibitor. Thus, McKenna and Towers affirmed in 1984 that their experiments “provide strong evidence for the hypothesis that the **hallucinogenic properties of Ayahuasca** are due to the visceral inactivation of MAO and the **subsequent oral activation of DMT** in the potion”. (McKenna, Jones, Ryall, 1990).

In 1990, however, McKenna himself recognized the hallucinogenic function of *Banisteriopsis* on its own: “numerous tribes from the same region prepare an hallucinogenic drink from the bark of *Banisteriopsis caapi* or other species of the *malpighiaceae*. This drink, which contains higher levels of *β-carboline alkaloids*, MAO inhibitors, is by itself hallucinogenic, and is sometimes taken alone” (McKenna, Jones, Ryall, 1990).

The initial contradiction with the empirical knowledge is thus resolved: modern researchers always derive advantages by considering *a priori*, any information provided by legitimate Ayahuasca “maestros” as reliable. Furthermore, such information can often orient research and permit many shortcuts.

3.2. From modern science to traditional science

There are highly diverse methods for the preparation of the Ayahuasca potion among the different indigenous Amazonian groups. For our purpose, to study the applications of Ayahuasca in the treatment of drug addicts, we needed to identify a suitable preparation. We used data supplied by shamanism in the ethnographic literature, direct observation and, finally, personal experimentation. In this last phase, it was very helpful to have the advice of pharmacodynamics. In fact, in traditional indigenous therapy for the treatment of drug addicts, there does not exist a specific method of preparation of the potion. An understanding of pharmacodynamics led us to gradually introduce improvements in the methods of preparation so as to obtain greater extraction of alkaloids.

We were then able to determine what amounts to use, the most practical containers, the best ways to preserve the vines in the time between harvest and preparation, the optimum heat and cooking time, the highest quality vines, and the most desirable ways to preserve the finished potion. We have found that is better to let the harvested pieces of vine dry out for several days prior to cooking; then to soak them in water for one full day; to cook them in a two-step process; to refrain from de-barking the vine; to construct an oven to concentrate the heat and to gently simmer the potion during the cooking process, to conserve the preparation in a dark bottle, etc. In our latest batches, the high concentration of alkaloids enabled the development

of crystals in the laboratory; this had not been possible with our previous batches, nor with batches made by others.

4. LIMITATIONS OF PHYTOCHEMICAL RESEARCH

At the risk of over-simplification, one can, for didactic purposes, group Ayahuasca studies into two categories, leaving aside journalistic accounts .

The Western dichotomy made between the sciences and the humanities is reflected in the dualistic approach taken towards Ayahuasca. On the one hand, we have the studies of phytochemistry, pharmacology and botany which claim to act objectively and concentrate on the substance and the brew as primary concerns. On the other hand, anthropologists, ethnologists and sociologists have zeroed-in on the cultural context, seeking primary explanations in social dynamics.

In both cases, reality becomes fragmented, reduced to the particular field of expertise of the researcher. However, the moment healer and patient come under the influence of Ayahuasca, this artificial discontinuity dissolves and the analytical separation of the observer is no longer valid. Ayahuasca creates the healer and vice versa. In the same way that dance is born through the movements of the dancer, the dancer ceases to be with the end of the dance. They both fade away together, after which there is neither dancer nor dance.

In other words, Ayahuasca and healer mutually reveal themselves and are inseparable. To treat them separately would undermine the subject, if not totally negate it. Similarly, although chemical analysis shows the presence of alkaloids in the brew, which may account for the existence of visions, it remains powerless to explain the “content” of the visions. An excessive materialistic explanation may claim that all mental phenomena are chemically determined, to which Haldane replies: “if materialism is true, it seems to me impossible to determine that this is, in fact, true. If my opinions are the result of chemical processes occurring in my brain, then they are determined by the laws of chemistry, and not by the laws of logic” (Haldane, 1937:157).

Karl Popper outlined the limits of deterministic theories which attempt to maintain the “casual linkages of the physical world”: “They are all self-destructive to the degree that they establish – certainly without wanting to – the inexistence of their proofs” (Popper, 1953: 103 ff.). Later on, he adds that this can be applied to scientific determinism: “Taking as a starting point man’s capacity to predict the world – a capacity which sees itself as unlimited in principle –, its conclusion leaves no further room for logical argument” (Popper, 1984: 71).

He concludes that if scientific determinism is true, it is impossible to rationally know that

it is: “One believes in it or not, not because one freely judges that the arguments and reasons in its favor are well founded, but because one is determined to believe it, and also because one is convinced that this matter can be settled rationally”. (Popper, 1984: 72) We base our statement that the active principles can never pretend to explain by themselves the effects of an Ayahuasca session, not only on epistemological arguments, but also on the frequent and repeated observation of the following phenomena:

- With the same brew and dosage and in the same session, we can observe totally different effects on the participants, ranging from no effect at all, to a “historical intoxication”.
- With the same brew and dosage, a subject may experience amazing variations in their response to Ayahuasca ingestion in different sessions.
- Taking a second dose may have either no effect at all as compared to the first one, or the opposite effect.
- One can observe an hallucinogenic intoxication in subjects present during the session who have not ingested the brew and who have not been mentally predisposed toward hallucinogenic effects (e.g., people accompanying a patient, or persons who live in the house where the session is taking place).
- On the other hand, the shaman can, by means of certain techniques, cause strong intoxication effects to disappear in a matter of seconds or minutes, without physically eliminating the brew.
- The same shaman, after ingesting ayahuasca for years, may experience no hallucinogenic effects on drinking the brew. He also may require smaller doses than his patients to experience effects, and in certain cases attain similar effects without drinking the brew.

To summarize, the composition of the brew is insufficient to explain the enormous variation in effects upon different subjects in different sessions. There is no strict proportional response in the subject, corresponding to the dose ingested, or to the alkaloid concentration of the brew.

These facts clearly define the limits of any phytochemical investigation. The raw material (the potion), becomes a key element in curative sessions, but there are many other intervening factors, which should be studied, in the absence of which a comprehensive understanding of ayahuasca shamanism is not possible. Linear, scientific, casual logic, by itself, appears inadequate in this case.

5. CONDITIONING FACTORS

5.1. Psychosomatic states

If the quality and the quantity of the brew are evident conditioning factors, so is the psychosomatic state of the patient at the time of the session.

The emotional, affective state of the patient will activate or neutralize the effects of ayahuasca, either consciously or unconsciously.

A voluntary and trusting surrender, the nearness of an emotional or traumatic experience, or a commitment within a therapy group, are all factors which help induce effects and responses to ayahuasca ingestion. Conversely, a bad diet, the use of other drugs or pharmaceuticals, a chronic pathological condition can create a resistance to the potion. Any of these factors, which are given by way of illustration, may interfere to produce a result opposite to that generally expected. Once again, we cannot isolate the individual elements, or strictly define cause and effect relationships.

In principle, one can say that the psychosomatic conditions are optimal for a “good session” when the patient has confidence in the therapist and follows his advice, which usually includes some basic rules about life style (avoiding eating pork or chili and drinking alcohol, abstaining from sexual intercourse prior to the session, *etc.*)

5.2. Environmental factors

In addition to factors related to the brew or to the patient, there are strong external influences which can affect the results of an ayahuasca session. They act at one of two levels: perception by the senses, or integration at the central level.

At the first level, perceptions by the five senses manifest themselves. Depending on their intensity, frequency and origin, the stimulus may or may not surpass the individual’s perceptual threshold. We will then have perceptions that are unconscious or subliminal. The conditions under which ayahuasca is administered therefore require controlled lighting, etc. Each of these elements can deeply modify ayahuasca effects, even to the degree of provoking or neutralizing an hallucinogenic intoxication, of producing visions of paradise or of terror, of causing vomiting or to calming the body and the mind.

One must note the immensity of the field of subliminal factors which condition the effects of ayahuasca. Depending on how advanced a person’s understanding is of ayahuasca, perceptions are sometimes developed, perhaps extrasensory ones, which in most cases are revealed as a sharpening of ordinary senses. The perceptual spectrum is amplified to encompass subliminal stimuli. Other stimuli remain subliminal, even with the perceptual amplification produced by ayahuasca. Nevertheless, even if they do not reach the conscious level, they affect the hallucinogenic experience and the maestro will take good care of them.

Beyond the five senses, we consider the possibility of internal perceptions: the sense of bodily balance or equilibrium in the internal ear, the sense of internal temperature (which may be different or dissociated from the external one), and the sensation which allows us to perceive our body and its spatial location.

At the **second level**, integration at the central level of supraliminal or subliminal perceptions leads us, for example, to define lateralization (right-left, above-below), positioning within time and space, identification of what is ours and what is someone else's (identity), understanding what is real and differentiating that from what is unreal, our sense of self and of the world, discrimination of forms, movements, volume, consistencies, etc.

Neurophysiology suggests that ayahuasca could provoke an excitation of certain cerebral centers such as the temporal lobes (integrative zones) or the limbic system. In this case, we would foresee an increase in emotion as well as sensorial intensification, since these functions are understood to be linked to those parts of the brain. From another angle, one can look at ayahuasca as a dis-inhibitor. As Sacks points out, inhibition "acts at the most elementary perceptual level, as if it were necessary to inhibit the primordial and that which is full of hedonic (pleasurable) quality, that which is protopathic, if the goal is to allow the surfacing of the epicritic (Head, 1920), complex, categorizing, and bereft of affect" (Sacks, 1985). Ayahuasca would act as dis-inhibitor, toning down the epicritic, allowing the protopathic to flower.

For example, the hyperosmia, which is often manifested during an ayahuasca session, probably corresponds to a stimulation of the ancient olfactory lobe (rhinocephalus), functionally associated with the limbic system, to which the function of emotional tone regulator is assigned. Odors that are normally subliminal, can subsequently affect the emotional state of a participant in a session.

An integrating level assumes the existence of someone who "is human", an emotional being. Sacks insists therefore, on an "essentially personal dimension inherent in all genesis, gnosis, or praxis", and on the "essentially *melodic* and *scenic* nature of inner life" (Sacks, 1985: 191).

The principal consciousness of the self derives from this "awakening" at a higher integrative level, with the consequent possibility of discovering and correcting errors of codification. In this sense, the ayahuasca experience can be a semantic one: it consists of creating and discovering meanings (Bulla de Villaret, 1973: 123). This presence of the self and the world, determines what we call a state of consciousness.

Environmental factors can thus powerfully shape the states of consciousness of a subject under the effects of ayahuasca.

5.3. Interference between participants

Observation of, and auto-experimentation with, ayahuasca, also allows us to understand the reciprocal influence on different participants in a session. Subtle exchanges become manifest, which we can only describe as “energies”.

Within the darkness and silence of a session, a pattern of perceptions is created, and the habitual continuity of relationships between individuals is decreased. Without extinguishing the unique sense of the ego, the participant influences and is influenced by his companions.

A certain “energetic quality” emanates from each participant and this is diffused within the space of the session, sometimes encountering a welcome opening in another participant. These emotions can be received and integrated pleasantly or unpleasantly, in a benevolent or a malignant manner. In the latter case, it is not unusual for a participant to induce vomiting in another, as a result of the transmission of an unacceptable influence. Such an event, extraordinary according to any current rational approach, is nevertheless frequently observed: facts are stubborn!

The power of suggestion is not enough to explain these instances, since,

- ✓ Effects of ayahuasca ingestion are almost always very surprising, unpredictable, and contrary to the pre-conceived notions of the participants.
- ✓ Animals (dogs, cats, birds, spiders, snakes, insects, frogs, etc.) demonstrate great sensitivity to those “energies”, which cause them to come closer, or to flee in an unusual manner. Upon contact with a patient with “negative” energy, a dog’s body may begin to tremble, or it may become suddenly aggressive, or it may vomit. All of these events have been observed.

5.4. Influence of the therapist

We must now point to the last and perhaps the central conditioning factor: the healer or shaman that presides over the session.

He acts as the orchestra conductor. His role consists of modulating, regulating, and controlling this complex dance of factors, harmonizing the energies in play. Without doubt, the quality of his own energy determines the result of the session. Basic energetic modulation is transmitted through sacred songs. His body is the therapeutic instrument par excellence, beyond constituting the element of his own initiation (Mabit, 1988 b).

We are here at the very limits of conventional conceptual formulations. We need to forge

new conceptual instrumentation, new vocabularies which permit description of phenomena beyond ordinary experience.

Meanwhile, we resort to the term “energy” to deal with the experience: a “bad” energy tires the patient, a “good” energy tones him; the same energy may be perceived by different patients through different senses (for some through light, for others through smell or sound, and still others through body tremors) The purgative effects consist of ejecting “bad” energies by vomiting and by other more subtle emanations. At a personal level, the ego experience concomitantly and inseparably involves the ejection of those negative energies at a mental level (“bad ideas”), at an emotional level (“bad feelings”), and at physical level (vomit, diarrhea, hypersalivation, copious sweating, *etc.*)

The concept of energy is foremost among all conditioning factors in ayahuasca ingestion, in accordance with empirical tradition, compatible with the most advanced concepts of modern science, and experimentally proven at an individual level, which is why it is critical to perform further studies in this direction.

6. CONCLUSION

The ayahuasca session becomes a controlled manipulation of the energies of each of the participants, the surroundings, and the maestro, as performed by the latter. It is a disinhibitor of energy blockages, perceived as thoughts at a mental level, and as symptoms in the physical body. In the reverse sense, it acts as an amplifier and stimulant of latent vital energies. The intended result is to harmonize those energies, leading to an improved psychosomatic/ somatopsychic dynamic.

The body contains and represents individual memory, a biographical engram, and furthermore, it contains universal or collective memory. The body represents “the somatic essence of consciousness” (Fidaali, 1991: 23). Ayahuasca permits the manifestation of the unconscious, the a-conscious, to consciousness.

That is why the traditional function of ayahuasca is simultaneously therapeutic to the individual and mystic to the collective.

If one does not reject patent and observable facts, we are inevitably led by these considerations on ayahuasca to a necessary epistemological revision of modern science, specially medicine. Conceptual frameworks, experimental models, classic paradigms, are all here revealed inadequate to explain such an experience. Aristotelian thought, the foundation of modern science, provides an inadequate system of coordinates.

No academic discipline alone can pretend to "explain" Ayahuasca. If a multidisciplinary group enriches the observation, however, it never waives compulsory self-experimentation to reach infra

or supra-verbal levels. The levels of abstraction of scientific language cannot be perfectly adapted to non-verbal levels (Korzybski, 1933), "static representations are used to account for a dynamic reality" (Bulla de Villaret, 1973: 49).

Thus, to the pure analytical approach it is essential to add a synthetic, holographic, integral procedure.

Here, observer and object of observation are confused, subject and object are one. As microphysics has already proven in its field, the simple act of observing modifies the observation (Wolf, 1988). The ideal standardization as guarantee of objectivity is revealed more than inadequate if not impossible.

These difficulties do not prohibit the development of a gnosis of the subject, but rather a new, original and, therefore, fertile approach.

The traditional Ayahuasca methodology offers the possibility of being present concomitantly with the external reality and the inner reality. That specificity of the Ayahuasca experience resembles that of the various knowledge pathways based on the induction of modified states of consciousness. Richard Marsh will say of those experiences that "allow one to inhabit the real world, the world of facts, to the place of the unreal and empty world of prefabricated abstraction; that allow one to experience the world instead of content to think about it, and from there, maybe, finally start living it ". (Marsh, 1969).

The ancestral wisdom of Ayahuasca invites us to leave our routines of life and thought to go to the discovery of new ways of knowledge and wisdom. The promoters of Transpersonal Psychology began to investigate in this direction: it is probably now one of the most promising openings in this field.

This opens the horizons of tomorrow.

BIBLIOGRAPHY

BULLA DE VILLARET H., 1973, « Introduction a la Semantique Générale de Korzybski », Le Courier du Livre, Paris, pp. 49, 122-124.

FIDAALI K., 1991, « Le champ de cohérences des perceptions altérées du Bangré africain », Académie des Sciences N. 16985, Paris, pp.18, 39.

GROF S., 1984, « Psychologie Transpersonnelle », Rocher Ed., Paris, 314 p.

GROF S., 1975, “Realms of the Human Unconscious: Observation from LSD Research”, Viking Press, New York, 257 p.

GROF S., 1985, “Beyond the brain: Birth, death, and transcendence in Psychotherapy”.

GROF S., 1988, “The adventure of self-discovery”, State University of New York Press, Albany, 321 p.

HALDANE J.B.S., 1937, “The Inequality of man”, Pelican Books. pp. 157.

HEAD H., 1920, “Studies in Neurology”, 2 Vol., Oxford.

KORZYBSKI A.H., “Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics”, USA.

MABIT J., 1988, « L'hallucination par l'Ayahuasca chez les guérisseurs de la Haute-Amazonie péruvienne (Tarapoto) », Document de travail 1/1988, Institut Français d'Études Andines (IFEA), 15p., Lima, 1988.

MABIT J., 1988, “El cuerpo como instrumento de iniciación shamánica”, Anales del III Congreso Internacional sobre Medicinas Tradicionales, Lima Perú. Vol. II Antropología Médica.

MARSH R. P., 1969, « Mandala », Belfond, Paris.

McKENNA D., JOHNS L., RYALL P., 1990, “Analysis of aboriginal drug samples by thin-layer chromatography and high-pressure liquid chromatography: detection of indolentylamine and β -carboline constituents”, Botany 435, Term Project.

McKENNA D., TOWERS G.H.N., ABBOT F.S., 1984, “Monoamine oxidase inhibitors in south american hallucinogenic plants: Tr yptamine and b-carboline constituents of Ayahuasca”, Journal of Ethnopharmacology, Vol 10, No. 2, pp.195-223.

NARANJO P., 1983, "Ayahuasca: Etnomedicina y Mitología", Ed. Libri Mundi, Quito, p.86

NARANJO C., 1973, "Harmaline and the collective unconscious" in "The Healing Journey: New approaches to consciousness", New York, Pantheon Press, 124-173.

NARANJO C., 1967, "psychotropic properties of the harmala alkaloids", Ethno pharmacological Search for Psychoactive Drugs, EFRON D.H., HOLMSTEDT B., BRINE N. S., US Public Health Service Publication # 1645, US Government Printing Office.

PENNES H. H. & HOCH P. H., 1957, "psychomimetics, clinical and theoretical considerations: Harmine, Win-2299 and Naline", Amer. Jour. Psychiatr y. 113: 887-892.

POPPER K., 1953, "Language and the Body Mind Problem", Proceedings of the X1th International Congress of Philosophy. 7, p.101 ff.

POPPER K., 1984, « L'Univers irrésolu: Plaidoyer pour l'indéterminisme », Hermann Ed., Paris, pp 71-72. Transl.fr. "The prescript to the logic of Scientific Discover y: II. The open Universe", Hutchinson, London, 1982.

RIVIER L. & LINDGREN J. E., 1972, "Ayahuasca, the South American hallucinogenic drink: ethnobotanical and chemical investigation", Econ. Bot. 101 ff.

SACKS O., 1985, "The man who mistook his wife for a hat", Gerald, Dockworth & Co. Ed., pp 190-191, 204.

SIEGEL R.K., 1989, "Intoxication, New York, Dutton, 390 p.

TART C.T., 1979, "Psicologías Transpersonales: Las tradiciones espirituales y la psicología contemporánea", 2 vols., Paidés Ed., Buenos Aires.

WEIL P., 1982, "A consciencia cosmica: Introduçao a Psicologia Transperssoal", Ed. Vezes, Petropolis, Brasil, 88 p.

WEIL P., 1988, « L'homme sans frontières: les états modifiés de conscience », Ed. L'espace Bleu, Paris, 204 p.

WOLF F.A., 1988, "Parallel Universes: The Search for Other Worlds", Your universe seminars, Simon and Shuster, New York, 351 p.