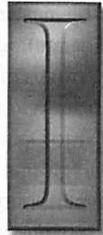


A cognitive-psychological study of **ayahuasca**

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AM a cognitive psychologist and a philosopher. My empirical work is concerned with semantics and

natural language, thought processes and creativity, and the phenomenology of human consciousness. My philosophical work focuses on basic conceptual issues pertaining to cognition and the scientific study of mind. Until my encounter with ayahuasca I did not have any special interest in psychedelics nor any particular interest in or knowledge of Amerindian cultures. I came to ayahuasca by chance. In 1991, I was invited to participate in a scientific conference in Brazil. Being an avid traveler, after the conference I took off and travelled around the country. One thing led to another, and I found myself in Colônia Cinco Mil, the Daime [a syncretic religion bringing together elements of Christianity, Indian traditions and Afro-Brazilian folklore] community in the Amazonian state of Acre. I stayed with that community for a week, in the course of which I partook of ayahuasca four times. At the time I knew practically nothing about this psychoactive drink nor, in fact anything about the community which hosted me. Now a significant part of my research program is devoted to the study of ayahuasca and the psychology of altered states of consciousness. I would like to explain why.

MAPS has pledged
\$5,000 to this research
into the analysis of
ayahuasca visions from
a cognitive psychology
perspective.

Returning home

Whatever its context of use, ayahuasca is a powerful psychotropic agent. Its consumption usually induces vivid and magnificent visions as well as hallucinations in all other perceptual modalities. Pronounced non-perceptual cognitive effects are encountered as well. These include ideations, intellectual and personal insights, and mystical experiences. In addition, the brew has significant affective effects: after an initial phase of fear, one usually experiences great tranquility that often leads to euphoria and a sense of deep

self-fulfillment and profound happiness. When I returned to my own world after my initial trip and experiences at Colônia Cinco Mil, I immersed myself in reading whatever I could about ayahuasca. To my amazement, I discovered the images I had seen in my visions were of types similar to those reported by indigenous persons. As a cognitive psychologist, I was puzzled. How could I, a person with a totally different personal background, see what the Indians see? I realized that what may have presented itself was a manifestation of the universals of the human mind.

Cognitive psychologists are especially interested in such universals, for these are the determinants that define the basic feature of what make us human. Usually, the universals are of a formal or structural type—the deep syntactic structures of natural language, the basic operations of logic and reasoning, elementary schemes of categorization. But the commonalities presented by ayahuasca were different: they pertained to content. This presented a great puzzle to me. Could it be that serpents and felines, precious stones and palaces are also universals of the human

mind? Are there contents that are not culturally determined? Contemporary cognitive scientists are not prepared for affirmative answers to these questions. Nor is such a state of affairs to be accounted for by current neurophysiological theories of the brain.

STUDYING THE scientific literature on ayahuasca, I further discovered that practically all of it pertained to either two clusters of disciplines. The first is that of the natural sciences—botany and ethnobotany, pharmacology and biochemistry and brain physiology; the second is that of the social sciences, notably anthropology. Important as they are, it seems to me that the two lines of research noted fail to touch upon some of the most crucial issues pertaining to ayahuasca. Both view ayahuasca from the outside, so to speak. Ayahuasca is intriguing because of the extraordinary experience it generates in people. Clearly this experience is psychological. The various natural sciences tell us what ayahuasca is made of and what brain events it may produce, but they say nothing—indeed they can say nothing—about the special experiences associated with the drink. The social sciences look at things from the outside too. Usually, anthropologists focus on the context of consumption but what they say about the phenomenon itself is quite limited.

Admittedly, ayahuasca

would not have been known to us in the West had it not been for the daring adventures of botanists and anthropologists. Yet, the real puzzles this brew presents pertain, I think, neither to botany nor to culture but rather to the human mind. As such, the study of ayahuasca belongs first and foremost to the domain of psychology, and more specifically cognitive psychology—the discipline investigating the workings of the human mind. While there have been some clinical psychological studies of ayahuasca, to date no cognitive investigation has been carried out.

Research resumes

What was further clear was that one cannot study the ayahuasca experience without extensive first hand acquaintance with it. After all, it would be strange to study dreams without having dreamt oneself, or to investigate music without having listened to various kinds of music.

Guided by the appreciation that the topic at hand should be studied from a cognitive-psychological perspective and on the basis of first hand experience, I decided to pursue the study of ayahuasca and to embark on an odyssey which was both personal and professional. First, I went for a short visit to Columbia. There in the Southern region of the Putumayo and the valley of Sibundoy I had my first encounters with ayahuasca in its native Indian context of use. Later from 1993 to 1995

I spent more than a year in Brazil and Peru. During this period I consumed ayahuasca in many different locales and contexts—traditional settings in the Amazon, healing sessions held by mestizo *curandeiros* (healers), indigenous rituals, rituals of the three syncretic religions União do Vegetal, Santo Daime and Barquinia, small groups of individual persons outside any institutional settings, and alone. Except for the first few sessions, all my sessions were summarized in writing immediately after the session ended. At times I also made tape recordings of sessions.

IN THE COURSE OF my stay in South America, I interviewed many users of ayahuasca regarding their experiences. At first, the interviews were conducted in a non-systematic fashion. Later, I returned to Brazil and Peru and employed a structured questionnaire. In it people were asked about the content of their visions, as well as other effects that the brew produced in them. The informants included indigenous and non-indigenous persons, medicine men and masters of ayahuasca ceremonies, people with long-time experience with the drink and ones who had taken it for the first time.

My study is couched in the appraisal that the bringing together of cognitive-psychological research and the study of ayahuasca benefits both fields of inquiry. The

conceptual framework and methodology of contemporary cognitive science allows a systematic analysis of the phenomenological data. With this, rule-like patterns in the ayahuasca experience may be defined and theoretical generalization about it may be made. On the other hand, the study of ayahuasca can contribute to cognitive psychology in that it presents new data pertaining to human consciousness, and thus new issues for investigation, new ways to look at things and perhaps new answers. As Aldous Huxley noted in conjunction with mescaline, the psychotropic agent reveals heretofore hidden and uncharted territories of the mind. With this, it may indicate that some features normally considered as defining characteristics of the human cognitive system need not necessarily hold. For instance, commonly made claims regarding human consciousness may be true only of “standard” consciousness, not of consciousness in general. But surely, any comprehensive theory of cognition has to encompass both the standard and the non-standard facets of the mind.

Data analysis

Currently, I am involved with the systematic analysis of the data I have collected. I have developed a codification system and all the data are now being coded and subjected to statistical analysis. The analysis is extensive, as it covers all aspects of the rich phenomenology of the

ayahuasca experience. Here I would like only to present a glimpse of one aspect of the data, that having to do with the interpersonal commonalities in the content of visions. The analysis at hand is based on two sets of data - the summary records of 70 sessions with myself and that of a group of 19 persons to whom I refer as independent drinkers. They are residents of Rio de Janeiro with an extensive familiarity with ayahuasca who at the present are not members of any institutionalized group. Having counted all the items indicated in my records, I ranked them by order of descending frequency. Likewise, I counted all items indicated in the interviews I had with the independent drinkers and for each item I counted the number of informants who reported having seen it; here, too, I generated a ranked list.

For my ayahuasca visions, the most frequent categories—those encountered in at least 17% of my ayahuasca sessions—were, in descending order: animals, beings (by this term I refer to creatures which are neither humans, nor animals, nor celestial ones), cities, palaces, birds, felines, serpents, artistic objects, celestial scenes, divine beings, landscapes, human beings, royalty and forests. The corresponding ranked list based on the interviews included all items reported by at least 47% of the members of the group. In descending order this list runs as follows:

beings, animals, palaces, human beings, serpents, ancient civilizations, birds, angels and divine beings, felines, forests, cities, landscapes and flowers. The similarity between the two lists is, I find, striking. First, note that except two—artistic objects and royalty—all the items on the list based on my experiences are also on the list based on the informant data. Second, except for two—ancient civilizations and flowers—all the items on the informant list are also on mine. It will be noted that there the category of ancient civilizations is very close to that of cities which appears very high on the list based on my own data.

DATA I have collected from other subjects, not fully analyzed yet, corroborate these findings. In particular, we note that on the one hand the items reported by indigenous people and pertaining to the context of the forest—animals, birds and serpents—feature on both lists. Also appearing on both lists, are non-natural beings—the spirits from which ayahuasca derived its name. But also on both lists, and featuring very prominently, are palaces. On the basis of interviews, my impression is that this is actually true of residents of Amazonia. They too, very often, see magnificent palaces—items which are definitely not part of the Amazonian or South American milieu.

There is much more to

say about these and other data. It seems that strong support has been found for the hypothesis of universals which first drew me to the study of ayahuasca. Noting again that the two lists are based on two totally independent corpora of data, furnished from different populations and on the basis of sessions taking place in different settings and contexts, I allow myself to say that I find this most remarkable. The full analysis of the data, an attempt to find a cognitive modelling of them and a treatment of the various intriguing theoretical and philosophical issues raised by them are the subject of a book which I am now writing.

Beyond data

During my stay in South America many people who knew I am a university professor asked me whether my quest is personal or professional... The truth is that in all my academic engagements I have never separated the personal from the professional. Evidently, this is even more so with respect to this ayahuasca quest. There is no question that my engagement with this brew has had a profound personal effect on me. This is not the place to talk about this aspect of my odyssey. At this stage and context suffice it to say that a scientific analysis of the ayahuasca experience along the lines indicated here constitute only one facet of the study of this experience. It is a most important one and it fits our Western European

discourse, one which I value very much and in which my entire life is grounded. Yet, while attempting to advance the scientific enterprise, one should, I believe, always keep in mind its limitations. Objective scientific analysis is indispensable for the gaining of further understanding of the non-standard cognitive phenomena ayahuasca presents. At the same time, however, to have had ayahuasca and remain the Western European that one had been beforehand amounts to having missed some of the most essential and most precious things that the ayahuasca experience can offer. With this, however, one finds oneself outside the domain of cognitive psychology. One is led to the province of philosophical reflection and metaphysical speculation as well as to realms which are very personal and as such are beyond the context of public discourse. Some aspects of the ayahuasca experience are beyond the realms of any discourse whatsoever. With respect to these one can only acknowledge profound gratitude for a most wondrous and blessed gift that one has been fortunate to be presented with. And as Ludwig Wittgenstein has said, "What we cannot speak about we must pass over in silence."•

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