

The Entheogens and their roles to Induce Altered States of Consciousness

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ABSTRACT

Humanity always had been in the search of meaning of life and its existence. "Why, we are here?" Is the oldest question of sciences, religions and philosophies. From this point of view, we have always been on cross-roads. Spirituality is as old as human spirit and quest of man for Self realization. There are ethno-botanical uses of plants, however less explored, which are used by some rarest spiritual schools for transcendence of 'normal' human consciousness. Entheogens are those substances, mostly psychedelics, which are used by such schools for ritualized way to evoke altered states of consciousness to enter into the "spirit world". These plants are known to have healing properties, however, still scientifically to be proven. The present paper had objectives to examine, the ritualistic use of plants in shamanism, Tibetan Buddhism and other similar traditions. Such practices, however does not known to promote drug addiction and drug dependence. Their use across such cultures is highly controlled. Plant shamanism is not only restricted to healing properties but also to soul retrieval, sin eating and other practices. The present work also explores neuro-scientific and psychological associations of such practices. The paper at the end, proposes possible scientific explanation to such psychedelic experiences which leads to broadening of spiritual consciousness.

Key words: Entheogens, psychedelics, shamanism, psilocybin, consciousness, DMT

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INTRODUCTION

It is well known fact of Human brain sciences that most of the potential of the human consciousness is untamed and undiscovered. Consciousness, itself is still an unexplainable phenomenon. It has been established by most religions and theologies that, Man has reached to apex of biological evolution and from here now, rest of the potential evolution which might be possible for Man, is the evolution of his 'being' or consciousness *per se*. Consciousness or self awareness is a unique attribute of human beings. Different levels of consciousness forms different levels of 'beings' or existences among humans. If one has attained the highest possible level of consciousness, the human being is attributed to have infinite level of consciousness, which the all religions or philosophies called as *infinite or cosmic consciousness*, including the Indian school of *advait vedanta*. The role of neurobiology in consciousness studies, is still in an infantile phase. Certain stages of consciousness can be induced by chemicals have been used in some esoteric schools of spirituality. Most of them are of botanical origins which are known to produce *altered states of consciousness* (ASC) and have profound impact on their subsequent quality and perspective of life of experimental subjects. In the present work, the roles of such psychedelic substances has been explored which might provide some probe into various states of consciousness and their impact on the subject. Such substances are called as *Entheogens*.

ENTHEOGENS

The word entheogen (Gr. meaning 'to generate the divine within') has been included in Oxford English Dictionary in 2007, noted that

"this word, used to refer to a psychoactive substance employed for spiritual purposes, has an ancient Greek etymon, but is only attested from 1977. The word was apparently coined as an alternative words, hallucinogen n. and psychedelic n., which were strongly associated with recreational drug use.

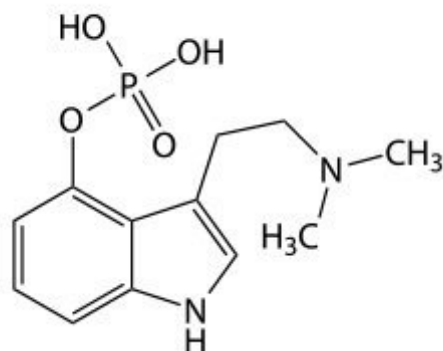
The study of entheogens is called *Etheology* or *Entheobotany*. In 1995, the Chicago Theological Seminary and Council of Spiritual Practices (CSP) organized a conference at California and later published the outcomes as *Psychoactive Sacramentals*. The following section deals with most two commonly used entheogens and their impacts of spiritual well being of the person in question.

Psilocybin cubensis

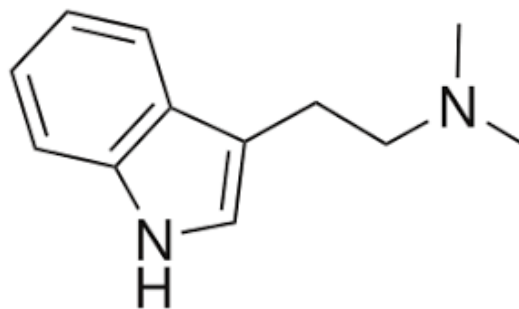
Subsequently, CSP initiated research work at Johns Hopkins University lead by Prof. Roland Griffiths, who carried out impact of psilocybin on extracted from the magic mushroom species *Psilocybe*. Psilocybin was given to healthy volunteers. Most of the subjects were reported to have dramatic increase of their subsequent well being. It was concluded from the study that the changes among the subjects were due to their religious experiences rather than the drug *per se* [1]. Another very interesting study belongs to Jean Millay, of University of Amsterdam, suggests that *extra sensory perception* (ESP) increases to a statistically significant level of 58% after consumption of psilocybin [2]. Psilocybin is traditionally used for spirit healing among exotic Mazatec people (Indigenous people of Mexico).

Ayahuasca

Ayahuasca is the brewed admixture, prepared from herb *Banisteriopsis caapi* vine and shrub *Psychotria viridis*, both are found in Amazonian forests, Brazil and USA. The brew is known to be used in *spiritual medicine* and various schools of shamanism. The former ingredient *B. caapi* contain alkaloids that act as inhibitors of mono amine oxidase (MAO) enzyme, while the later shrub *P. viridis* contains psychoactive compound *N, N-dimethyl-tryptamine*, or DMT. DMT gained popularity among people through the book written by Dr. Rick Strassman namely, *DMT: The Spirit Molecule*, which was based on his research on DMT for its spiritual properties. The study is suggestive of experience of ASC symptoms like euphoria, oceanic boundlessness, ego dissolution, out of body experiences (OBE) and instances of experience of alien abduction [3] are reported by volunteers under study. DMT can also induce the state under which he or she become able to communicate with other intelligent life forms like *machine elves*, a term coined by Terence McKenna, the famous psychedelic- ethnobotanist [4].



Psilocybin



DMT

RITUALS AND INSTANCES OF ENTHEOGENIC USE

The psychedelic experience of *Bardo Thodol*

The Book, *Psychedelic Experience* which was published in 1964 was written by Timothy Leary, Ralph Metzner and Richard Alpert is based on Evan-Wentz's translation of the

Tibetan Book of the Dead. According to Leary, the Tibetan Book of the Dead is “a key to the innermost recesses of the human mind, and a guide for initiates, and for those who are seeking the spiritual path of liberation”. The Tibetan Book of the Dead was called in its own language the *Bardo Thodol*, which means “Liberation by Hearing” (*Thos-grol* in Tibetan) on the After-Death Plane. The manual contains instructions for peaceful death and subsequent happy rebirth. It directs the dying person’s awareness to remind the instructions during his voyage of death. Timothy Leary used LSD trips in consonance with *Bardo* instructions. However, he suggested that without awareness to the instructions may of little importance.

Hopi shamanism

Hopi shamans used tobacco as when something important is to be discussed or when *pahos* (prayer feathers or sticks) have been made and the makers wish to “blow their desires” into them. *Nicotiana attenuata* and *Nicotiana trigonophylla*, the two native tobacco species occurring in the Hopi environment, were admixed with other plants. The resulting mixtures were known as *yoyviva*, or the “rain tobacco” or *omawwiva*, “cloud tobacco”.

Central American shamanism

The San Pedro cactus (*Trichocereus pachanoi*) which is found in highland and coastal Peru contains mescaline and other related psychoactive alkaloids. It is known in Quechua as *huachuma*, which means “cactus of the four winds,”. This hallucinogenic plant is found in the art and religious symbolism of ancient Andean civilizations beginning with Chavin de Huantar in the second millennium B.C.E., and continuing through Nazca, Moche, and Chimú reigns. The coca plant (*Erythroxylum coca*), the source of cocaine, is used by shamans of the Andean region. They chew coca leaves which were mixed with some alkali providing ash or lime in order to facilitate meditation or producing *trance* when healing and performing other ritualistic ceremonies. Dried coca leaves are also used by shamans for purposes of divination.

NEUROBIOLOGY OF ENTHEOGENIC USE

The neurobiology and neuro-pharmacology of spiritual perception for various entheogens have been investigated. The present work is taking DMT as a model molecule to present a neurobiological explanation to various spiritual experiences. DMT is an indole alkaloid widely found in nature, plant genera like *Phalaris*, *Delosperma*, *Acacia*, *Desmodium*, *Mimosa*, *Virola*, and *Psychotria* contain DMT in their various tissues. It is also found in low concentrations in brain tissue [5]. Brain tissue is rich in the tryptamine hallucinogens which acts as a serotonin 5-HT_{2A} agonists. Serotonin neurotransmitter has been thought to be the main contributor to the psychedelic effects of DMT. DMT may potentially act as a neurotransmitter to exert a signaling function in regions of the CNS, which are involved in sensory and visual perception [6]. According to one study dependence potential of oral DMT and the risk of sustained psychological disturbance are minimal [7]. Strassman, in his book, has suggested that spiritual impacts of DMT can be mediated by the pineal gland within the brain, which is considered to be main site of circadian rhythm regulation, (through light induced production of melatonin) in vertebrates and human beings. In yogic system of spirituality pineal gland might corresponds to *Ajna chakra*. It is notable, that pineal gland has been esoterically considered as *seat of the soul* or *third eye*, in most spiritual schools.

CONCLUSIONS

Entheogenic use still has been largely restricted to their psychedelic impacts. Their mechanisms of action on different functions of brain are still less being explored for their use in treatment of psychosis, schizophrenia and other mental disorders. How they impact person's perception for reality? Is it broadening of consciousness into the higher plane or is it a mere distortion of perception? Such questions can only be addressed if proper neurobiological research is undertaken without being biased about their understanding of being addictive or recreational drugs.

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