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Shamanism and Psychoactives: Theory, Practice and Paradoxes of a Field Study in India

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Abstract: Since its origins, the debate on the interaction between religions and psychoactives has been strongly influenced, both positively and negatively, by prejudices, policies, fashions and trends that had little to do with scientific research. Stigma and exaltation in different historical moments have equally characterized the study of the presence and use of so-called entheogens in the different declinations of the shamanic phenomenon around the world. This article attempts to shed light on the various trends regarding the state of the art, providing new epistemological elements on the basis of an ethnographic investigation among some Indigenous peoples of India. The production of alcoholic beverages (fermented and distilled, but sometimes in combination with other psychoactive or hallucinogens among the starters) is a fundamental trait of the aboriginal (*ādivāsī*) cultures of the Indian subcontinent. Not immune from an attempt at political instrumentalization, which occurred both in the colonial period and in the contemporary era, the discourse on the natural production of these sacred substances is today the key to understanding indigenous ontology and its traditional idea of sustainability. Far beyond the mere documentation of the induction of altered states of consciousness, this investigation involves the discovery of local pharmacopeias, as well as principles of fermentation and food preservation.

Keywords: entheogen; shamanism; alcohol; fermentation; palm wine; mahua; Saora; Kond; adivasi; religion and altered states

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1. Introduction

Since the dawn of human history, the consumption and experimentation with psychoactive plants have often been intertwined with religious experience. Due to the acquisition of an altered state of consciousness, the inherent effectiveness of certain substances has always been considered the cornerstone of spiritual exploration. It unfolds the limits of human perception and understanding of the world, elevating the individual to a transcendent or divine plane. Or at the very least, inducing a kind of psychosomatic metamorphosis, capable of raising the level of listening and understanding of human beings towards the surrounding universe. The literature on the union between psychoactive substances and religions is vast [1,2], and it would be reductive to even attempt to propose a synthesis here. However, it is useful to put forward some epistemological considerations. The use and sacredness of substances in ancient history and prehistoric periods are undeniable, though these topics are hotly debated in academia. Rich testimonies have reached us through literature and archaeology [3,4]. However, the real revolution occurs in the modern era, after Christopher Columbus's accidental discovery of the Americas. Since the beginnings of the spice trade, and especially after the acquisition of routes to the New World and

the so-called East Indies, European explorers, merchants, missionaries, and scientists developed a particular interest in the food, medicines, and medicinal plants of the "exotic" peoples they encountered. Similarly, in the remote regions of Siberia and Central Asia, Tsarist Russia was the driving force behind a similar exploratory and colonizing impulse. The accounts and descriptions of substance use and the effort to taxonomically classify species, although filtered through a heavily Eurocentric culture and Christian missionary zeal, were revolutionary and would ultimately give rise to the modern field of ethnobotany at the end of the 19th century. Similarly, on an epistemological level, exploration extended to the knowledge and representation of cultural otherness, particularly the American and Asian civilizations, as well as the kaleidoscope of their Indigenous peoples. In this case too, it is an inextricable blend of knowledge, traditions and spiritual perspectives that often intersected with the use of psychoactive substances not always known in old Europe, that could be studied, compared and examined by scholars [5,6]. Undoubtedly, this abundance of empirical evidence had the effect not only of relegating speculations about the most ancient history of the peoples that were visited to the background but even of shedding new comparative light on their cultural particularities. In the field of Humanities, the history of religions was enriched with the birth of innovative pioneering, and at times it was challenged by antithetical perspectives, such as from anthropology, ethnography and sociology [7,8]. What I mean by this is that working on the revolutionary role of colonial and post-colonial sources regarding the interaction between religious experience and substances is immensely easier today than the exploration of cultures and civilizations that have been missing for millennia. This is true despite contemporary humanity's tendency to reflexively identify the hazy characteristics of its ancestors with its own, almost unconsciously projecting the image of itself and its practices where scientific research has not yet been able to define the contours of established theories [9].

In a recent article [10], I examined how, however, the study of this relationship has not been straightforward. Already, following the Napoleonic campaign in Egypt and Syria (1798–1801), the consumption of cannabinoids was spreading in France, both for recreational purposes in a popular environment or among the troops, and in a more exclusive context: intellectuals such as Théophile Gautier (1811–1872), Victor Hugo (1802–1885), Alexandre Dumas (1802–1870), Charles Baudelaire (1821–1867) and Honoré de Balzac (1799–1850) emphasized "artificial paradises" [11,12] as a paradigm of a utopian creative-artistic process. Aside from such opportunities for experimentation, European colonial powers had always maintained a pragmatic view of substances. That is, with a few exceptions [13], greater attention was always paid to the therapeutic potential of a botanical principle in the context of the *materia medica* of the country of origin and on any possible related tax revenue or commercial exploitation. A classic example from English history was the attempt, abandoned at birth, to tax *ganja* and cannabinoids in India (because they were too widespread and not so profitable) and instead, the conflict of the Opium Wars (1839–1842; 1856–1860) was deemed more convenient against China [14]. Pioneering studies of the early decades of the 20th century were certainly the book by Louis Lewin (1850–1929), *Phantastica, Narcotic, and Stimulating Drugs* [15], and the research of Richard Evans Schultes (1915–2001) at Harvard University: by documenting the botanical identities, chemical components and cultural uses of psychoactive plants throughout the world, they developed the foundations of ethnobotany as such [16]. Nevertheless, the positive and positivist approach of many European and American studies ended up in my opinion being heavily influenced by the caesura of prohibitionism.

In fact, since the mid-19th century, religious movements such as the Methodists, and the Presbyterians first, and then Mormons and the Salvation Army, questioned the use of alcohol within the Christian rite, coming to heavily influence the laws and institutions in

Northern Europe and in particular in North America. The first decades of the 20th century for Canada and the United States are par excellence the years of prohibition, in which even great entrepreneurs such as John Rockefeller (1839–1937) and Henry Ford (1863–1947) took a stand against the use of alcohol and substances in general (with particular reference to opium and cannabis). In a general atmosphere in which the use and abuse of psychoactive substances were considered a moral degradation worthy of a social stigma, even before being translated into a sort of clinical disease, not even the Humanities were able to escape this negative influence. In anthropology, such a caesura determined an anthropological bias in which the use of psychoactive substances (primarily alcohol) in many Indigenous cultures determined a sort of incomprehension and insensitivity to local cultural attitudes, emphasizing a certain diversity of them on an ethnic basis [17]. This is clearly a very delicate issue, it was typical of a certain part of European culture, in some ways influenced by its monotheisms, which was still very distant from the concept of decolonization and for which research on substances was still taboo, particularly if related to a spiritual quest or religious experience. It is interesting to note that there is also the opposite process, that is, when, having legitimized the problem of the use of substance and alcohol in particular, ethnography began to "deflate: the problem of abuses in a fieldwork context, almost as if this could reflexively compensate for a prejudicial misinterpretation from the colonial era [18,19].

From these simple introductory examples, it will be clear that not only each individual study in itself but also the entire history of scientific thought regarding psychoactive substances deserves special attention. Thus, the growing awareness of natural and synthetic psychoactives in the 1950s that inspired the work of a diverse and influential group of writers and philosophers such as Jean-Paul Sartre (1905–1980), Aldous Huxley (1894–1963), Alan Watts (1915–1973), Alan Ginsberg (1926–1997) and William Burroughs (1914–1997), paved the way through the beat generation toward the so-called psychedelic revolution. There is no doubt that at this juncture—in the 1960s under the aegis of figures such as Timothy Leary (1920–1996), Ken Kesey (1935–2013) and famous musical groups such as the Beatles or the Doors—a certain dialogue between pop culture and academia was able to create new trends and openings, in particular toward ritual practices of Indigenous cultures and in the re-evaluation of Eastern religious and doctrinal questions [20,21].

The turning point in the 1970s was the definition of entheogen, in particular by the classicists Carl A.P. Ruck (1935–) and Blaise Daniel Staples (1948–2005). In an academic context in which there was an intense debate on the redefinition of the role of substances in the religiosity and ontologies of the ancient world, with particular reference to the Dionysian and Bacchanalian cults (but also in reference to the doctrines of the Eastern initiatory cults through Hellenism), the definition of entheogen had the merit of renewing and ennobling the concept of psychoactive [22]. Abandoning definitions such as psychotropic or drug, now perceived as stigmatizing or denigrating in the old process of deconstruction of the concept of substance, the term entheogen emphasized in a certain sense the intrinsic link between individual, botanical agent and divinity within the hallucinogenic and psychedelic experience. The Greek roots of this word indeed clearly allude to the divine essence and the creative power of the plant.

In this lively framework [23,24], which we have just outlined here, one of the greatest paradoxes occurs precisely in one of my fields of specialization, namely the study of shamanism. In fact, the so-called inflation or deflation of the issue concerning psychoactive substances has often poisoned the scientific debate, to the point of hindering the effort to understand the true role of substances in the ritual act, as well as in the real understanding of the shamanic phenomenon. In this article, I intend to introduce this issue as the state of the art from an anthropological and historical-religious perspective, providing several

case studies from Indigenous peoples' traditions of the Indian Subcontinent. In doing so, I will demonstrate how, in modern shamanism, the use of substances to achieve an altered state of consciousness is, on the whole, of relative importance. Rather, it is of central importance to understand the symbols and functions of native ethnobotanical traditions. This heritage, based on the community's empathy with the environment and the botanical elements composing it, unfolds the understanding of local pharmacopeia, ontologies and indigenous worldviews. As they are perceived as living and consubstantial entities, such notions about substances may hold the key to rediscovering a sustainable ethic.

2. Materials and Methods

This paper consists of two distinct parts. The first part will briefly explore the history of thought about the relationship between religious experience and psychoactive substances, with a particular focus on the strand of studies related to shamanism. In doing so I will try to emphasize an epistemological paradox that in my opinion has not yet been sufficiently explored and that runs through the subject by adopting a double interpretative register. That is: just as the theme of the relationship between psychoactives and religion has been influenced in academia, both positively and negatively, by fashions, trends, fears and social policies and other exogenous elements, a similar bias seems to be transmitted in the attempt to define the main characteristics of shamanism, which ends up questioning not so much the sacredness of the psychoactive substance itself, but rather its actual indispensability in reaching an altered state of consciousness. Such an attitude would imply a not-always-justified discrimination of some cultures with respect to others in the analysis of the shamanic phenomenon around the world. In this first theoretical section, I use all the historical literature on the subject, mentioning some milestones in the history of religions, anthropology, the history of explorations [25–27], adding some modern critical works of synthesis [28,29], basic scholastic manuals and encyclopedic works [30,31] by the most renowned scholars who have dealt with the subject.

The second part consists of an anthropological field study, the result of a long period of ethnographic research (several missions discontinuously from 1997 to 2018), in which I have always adopted the emic point of view, participant observation, carrying out qualitative interviews and phenomenological interpretative analysis when possible. The field in question concerns two small Indigenous communities, the Saora and the Kond, who live in the jungle districts of the Indian state of Odisha. Due to their peculiar conditions of backwardness, isolation and distinctive culture, the Indian government had classified both as Particularly Vulnerable Tribal Groups, a subclassification of Indigenous communities, normally defined as Scheduled Castes or *ādivāsī* (i.e., aborigines). The predilection of this field is due in particular to the fact that these communities have been handed down for countless generations a shamanism, probably of archaic origin (even if recently the Saora have been predominantly Christianized), and they are also known for the preparation of particular psychoactive substances (especially alcoholic beverages) that are quite renowned and not at all unrelated to ritual matters.

As far as the Saora are concerned, the area taken into consideration is that of the Lanjia Saora subgroup divided into several settlements between the districts of Rayagada and Gajapati (N 19.0935, E 83.9598). With a population of about six thousand units according to the Census of India 2011, today probably increased, they speak the original Saora or Sora language, classified as part of the South Munda family, on account of its particular features descending from Austroasiatic stock [32]. For the Kond the area taken into consideration is that of the Kuttia Kond subgroup: they are divided into several settlements near the Kothgarh Elephant Reserve in the Kandhamal district (N 19.8587, E 83.6706). Reduced today demographically to a few thousand according to the Census of India, the Kuttia

Kond speak Kui, a Dravidian language descending from a south-central stock, classified as part of the Gondi-Kui family [33].

Apart from what is reported by classical ethnographic sources of the colonial [34,35] and post-colonial era [36–39], the data emerging in this second part are mainly primary ethnographic sources, some of which have never been published before. The informants were generally village chiefs, spokespersons of local communities, shamans, government agents for tribal affairs, and common people of the settlements. Given the extended time range of the investigation and the privacy issues to be respected, I will maintain the anonymity of the informants and I will make a synthesis of the information. This second part in particular will be corroborated with regard to botany, chemistry and pharmaceuticals as also by more recent articles and materials cataloged in the most important scientific databases, such as Jstor, PubMEd, Elsevier or indexed on Scopus or Web of Sciences (WoS).

3. Results

3.1. Inflation and Deflation of Psychoactives in the Shamanic Paradigm

One of the most specific characteristics of the shamanic phenomenon is the ability of the ritual operator to induce himself into a state of trance. Only through this condition is he able to communicate with the spirits, foresee the future, act for the good of his community, and resolve the primary causes of disasters and diseases. On the other hand, in the complex corpus of indigenous knowledge on natural remedies that can be obtained from the surrounding environment, the presence of psychoactive substances is often unquestionable. It would therefore be self-evident that the altered state of consciousness, so crucial in shamanic work, could be achieved through the use of these substances, but a large part of the studies demonstrate that this is not the case.

Summarizing the ethnographic approach to the problem, it is possible to affirm that the shamanic phenomenon was "discovered" and defined as such, toward the end of the 17th century in the Evenki area, speaking Tungusic languages, in central-eastern Siberia [28,29,40]. From a comparative and conventional perspective, the term later spread in the Russian basin of influence to define similar religious phenomena in the Central-Asian area. While only later—and in particular after the Jesup North Pacific Expedition (1897–1902) led by the father of American cultural anthropology Franz Boas (1858–1942)—the term would also spread in the Americas, not only with the aim of emphasizing some similarities in religious practice but also to ennoble the native spirituality until then defined in derogatory tones in most colonial sources [41].

Nevertheless, in the original nucleus of Asiatic-Siberian studies, while not denying the presence of psychoactive substances both in rituals and in the daily life of Indigenous peoples, it is reported that these were not used in reaching the shaman's trance. In contrast, several studies extol the effectiveness of shamanic practice precisely by virtue of the ability of its operator to induce himself into an altered state of consciousness, without the aid of psychotropic drugs, but with the mere use of "mechanical" techniques. These would have been based substantially on the sensory overstimulation obtained thanks to the drum music and the muscular and cardiac performance achieved through dance [25,42,43]. Interestingly, the importance of psychoactive substances, where present, used as offerings, food, in honor of the gods and ancestors is not denied here. In the Siberian area, the use of alcohol and derivatives and muscimol is generally reported [44]. But these are generally taken after reaching trance, and therefore, in a state of possession of the shaman by other subtle entities. Precisely because of the state of possession, the shaman would also be able to tolerate an exorbitant quantity of substance—mainly alcohol, tobacco, but often also other active ingredients—which often goes well beyond the limits of human tolerance and resistance, in

clinical-pharmacological terms. But paradoxically that same substance would not be used for its most obvious reason, that is, reaching the altered state of consciousness [45].

The matter is further complicated by the publication of a milestone in the history of the study of shamanism, namely *Le chamanisme et les techniques archaïques de l'extase* [25] of Mircea Eliade (1907–1986). This was an attempt to rationalize previous studies on shamanism through a comparative approach, almost a hermeneutic synthesis, finding the clue to the mystery of shamanic trance. Eliade for his part does not propose a real theory on substances, but every time he mentions in this and other works the aid of psychoactives in the shamanic experience, the question is shrouded in deflating and derogatory tones [46]. The reasons for this may be the most disparate, such as a certain distrust of the scholar toward exotic drugs, which was typical of his time. His "traditionalist" approach saw the technique of ecstasy as a relic of an ancient knowledge, belonging to other eras, which still shone in the decadence of modern times in the most remote corners of the world (in this sense I refer to the debated question of his adherence to perennialist thought [47]). Here, mysterious ritual operators were still able to see what the common man cannot and to communicate, to a certain extent, with the gods. But the need to resort to a hallucinogenic expedient, such as a botanical active principle, testifies to the incipient decadence and degradation of the phenomenon when the shaman is no longer able to reach the trance by himself. And this not only met positively with a certain part of the scientific literature of the time but at the same time was reflected in the reality of the majority of the ritual dynamics of the Eastern world. In shamanism, as in Buddhism, Hinduism and other religious traditions, generally those who perform the ritual abstain from what could be perceived as altering, contaminating or taboo in a given culture. It is a question of the purity of an introspective preparatory process, often guaranteed by abstention—in the broad sense understood as absolute fasting, silence, work inactivity [48,49].

This approach and its possible arguments obviously clashed with ritual contexts including the use of psychoactive substances, in particular the Meso and South American traditions in which the various *curanderos*, *peyoteros*, *ayahuascheros*, had made the use of the substance, often understood as a mother plant, the cornerstone of the entire shamanic performance. Within the field of shamanic studies, understood as an anthropological and historical-religious sub-discipline, an unresolved debate arises between scholars who support the use of substances and skeptics. Among the former are many Americanists (but not only) who have a more flexible and inclusive attitude toward the different religious phenomena of Indigenous peoples in the world, under the umbrella definition of shamanism [50,51]. They emphasize the importance of the ritual context and its purpose for the benefit of the community, rather than the modality of reaching an altered state of consciousness, if substances are expected in any case. For the latter, generally of Russian and European origin, greater importance is placed on the 'mechanical', musicological capacity, as a secret shortcut to sensory overload: a prelude to cognitive alteration. In this second case, there is a tendency, deemed by many to be a sort of self-referentiality of Russian studies, to consider shamanism as an exclusively Siberian phenomenon, or in any case, a Eurasian trait that cannot be exported to the culture of other continents [52].

This issue remains unresolved, also because it implies the notion of the elitism of the shaman. In the first studies, and in any case with a certain continuity in the Asian area, the shaman is such by election, as chosen by the spirits. Being a shaman is not the result of a conversion, nor of a choice, indeed it often initially goes against the will of the initiate. Although the other members of the community share the same cosmology and the same pantheon with the shaman, he stands out from them because he is the only one able to apply the secret technique that will lead him to a state of trance. He is therefore a charismatic person; he is a guide. In the Amazonian or Andean traditions, however, he

administers the substance which is however experimented with and shared by all members of the group. The vision is therefore no longer elitist or exclusively individual. This does not affect the centrality of the American *curandero*, but it also implies that other members of the community may also have shamanic propensities or abilities to learn, understand and develop. So, in a certain sense, the debate on the knowledge of psychoactives, their use and their possible sharing, has ultimately influenced the perception of the elitism of the shaman as his fundamental characteristic [53].

In the meantime, in the mass culture, interest in psychoactive plants and shamanism has continued to grow and evolve. In the New Age movement, especially in the last decades of the twentieth century, it is possible to find a clear example of how several intellectuals, trained and affiliated with various prestigious university institutions, have at a certain point in their lives decided to abandon the rigid epistemological confines of academia and open themselves to more experimental paths. Authors such as Carlos Castañeda (1925–1998), Michael Harner (1929–2018), Andrew Weil (1942–), Wade Davis (1953–) and Terence McKenna (1946–2000) had great popular appeal. Although in my opinion, the trend of spiritual research of those years passing through entheogens is absolutely positive and legitimate, especially in its yearning for emancipation from preconceptions and theoretical superstructures of colonial origin, the problem is that many authors appropriated and arbitrarily mixed elements from the cultures of Indigenous peoples, doctrines and oriental religions, whose vision was often partial. I think it is legitimate today to speak of a revival of the fashion of psychoactive substances, for which the New Age was an important precedent. Nevertheless, the movement of that time contributed to creating great confusion about the authenticity of traditional and non-traditional practices, about the legality and safety of drug use, about the intellectual property rights of the natives on the psychoactives traditionally used and their derivatives, and about the right to the free practice of religion [54,55]. This is still reflected in many contemporary movements.

3.2. Food of the Gods and the Tree of Knowledge, a Case Study in Aboriginal India

As far as my fieldwork experience among the Indigenous populations of India is concerned, I can say that everywhere there is widespread use of homemade alcohol, both distilled and simply fermented [56,57]. For the purposes of this study, I find it interesting to give the example of the fermentation process of palm sap that produces a drink known as "toddy" or *kallu* (4–8% alcohol content depending on the area). In India, this is produced almost everywhere by a series of plants belonging to the same family of Arecaceae and the same order of Arecales, for example, the coconut palm (*Cocos nucifera*) or the tuber palm "palmyra" (*Borassus flabellifer*) or the silver date palm (*Phoenix sylvestris*). Moreover, in the forest areas of Odisha among the tribal groups of the central districts, the production of *salap* or *salpo* (4–5% alcohol content) is prevalent, a wine produced from the juice of the so-called *kithul* palm, or fishtail palm (*Caryota urens*), due to the characteristic shape of its leaves.

This production is so deeply rooted that it has become a distinctive feature of the Indigenous populations: many people from the city still love to go to the most impervious areas of the jungles of the indigenous districts just to buy a product that is considered traditional and that is somehow considered labeled with a sort of guarantee of protected designation of origin [58]. In reality, the issue of artisanal wine production in Odisha has always been quite problematic, due to issues related to abuse in consumption, but above all, to the production of a spurious product. In fact, in the preparation of homemade spirits, no attention is generally paid to the elimination of the heads and tails of the product, containing impurities, but also rich in aromas, which however can be fatal due to the presence of methyl alcohol. Accidents in this regard have been frequent [59]. It should be

noted here that while the wines produced from palm trees are generally fermented and are quite safe, the variety of liquor produced from the dried corollas of the *mahua*/*mahul* flower (*Madhuca longifolia* var. *latifolia*—formerly *Madhuca indica*), which is a completely different plant of the Sapotaceae family/Ericales order, requires a more complex preparation, similar to distillation. Known as *mahuli* (25–45% alcohol content) in several states of India, the final product is equally considered emblematic of the cultures of Indigenous peoples, and is then frequently used for the same social and ritual uses as *salap* [60].

But before reviewing the uses and properties of these plants, it seems essential to analyze their value and symbolic importance in a religious context. *Caryota urens* in particular, like many of the palms mentioned, is considered a mother plant by the Indigenous communities of central Odisha and I believe that this concept is something archetypal whose origins are lost in the mists of time. It is interesting to note that in Indian myths, even in the zoological field, many animals are considered sacred or taboo because they are related to some myth because they are the hypostasis or the vehicle of divinities or subtle agents. But among the various animals, the cow rises with its cosmic symbolism to a sort of universal mother for the milk it is able to offer. The current debate on milk production and the legitimacy of the exploitation of this animal is extremely intense in India and too complex to be explored here [61,62]. But it is possible to infer that on a religious and consequently ethical level, one of the many reasons for its sacredness is the drinkability of cow's milk for all ages and multispecies groups because, containing growth proteins and micronutrients, it is understood in a broad sense as a universal source of sustenance. From a karmic and religious perspective directed toward the animal world, it is consistent to believe that one of the symbolic functions of the cow is that of a universal mother. Likewise in the arboreal sphere, even the multiplicity of plants that make up the Indian forest are sacred for the most disparate reasons. But it is interesting to note that, *mutatis mutandis*, precisely those that secrete latex constitute for the purposes of our analysis the botanical counterpart of this sort of ancestral mother [63].

According to the traditions of the Kond of Kandhamal, as well as among the Saora of Rayagada, the latex secreted by the plant, fermented and transformed into wine, is the favorite drink of the gods and spirits of the forest. But also the souls of the deceased, who are preparing to leave for the afterlife, need this libation as a viaticum for the chthonic path. During shamanic rituals, as soon as the shaman enters a state of trance, his body becomes a receptacle for these subtle entities that are able to possess him. The offering of the substance, taken through the mouth and the body of the shaman, is absorbed directly by the entity that receives it. For this reason, the formal offering of alcohol is a crucial moment in each ritual. In other words, through alcohol, the human community seals the alliance pact with the forest-governing deities, but also with the community of ancestors. Through repeated libations, annually poured in commemoration of the deceased, the ancestral bond with the protectors of the various clans is renewed. Likewise, the shamanic ritual is an occasion of danger because foreign entities, demonic or negative, can be attracted by offers that are not intended for them. These can be the blood of sacrificed animals, usually goats, pigs or buffaloes depending on the type of ritual, but in particular, it is the palm wine that will be offered in abundance. This unquenchable thirst of the spirits of the deceased corresponds in Hindu iconography to the figure of the *pretas*, or hungry ghosts, whose belly width is inversely proportional to the minute dimensions of their mouths: hungry for gross elements (*bhutas*) composing physical existence and encompassing the material world, they are condemned to expand until they disintegrate, while the small mouth is incapable of sucking the vital energy from the world of the living [64]. In particular, it is said that they yearn for wine, not only because it is not present in the afterlife, but because essentially like a mother's milk it would allow them to be reborn and return to the world.

The theme of breastfeeding returns in a Kond cosmogonic myth, which tells of Nirantali, a sort of Mother Goddess, but in her adolescent form, who had her first menstruation. Soon after, abundant milk began to flow from her breasts and fall to the ground. Annoyed by this waste, she scolded the milk and it gave birth to the first *kithul* palm where it had fallen. When the first men tasted the plant, they found it to be poisonous. According to another version, they tasted the juice, but it was bitter and had the taste of blood. After a few days, it had turned white and transformed into wine. Later the wine was offered to a mother who had problems breastfeeding and she immediately began to drip abundant milk from her breasts for the vigorous suckling of her children. In another version, the first wine was offered to a sick person and he recovered.

Typically, among the Kond, these stories are passed down orally through the Kui Gaani, a sort of Song of Creation composed of dozens, if not hundreds, of stanzas constituting the cosmogonic myth of the community. This corpus, which is disappearing today, and which has probably never been recorded and translated in its entirety [39], is quite characteristic because it boasts numerous variants. More than elaborating a story with a logical-chronological *consecutio* of events, the song represents a continuous succession of images, brush strokes, suggestions on the traditional myth of the group. In the above-mentioned story of Nirantali, we have several scenes in sequence as if they were different stories, however, linked to each other. First, the goddess becomes fertile, and from her milk, an ancestral plant is born. Then men try to draw nourishment from it, but something goes wrong: perhaps it is a probable allusion to the detoxification process of parts of the palm necessary to make them edible, or more likely to the time needed for fermentation. So it is a sort of metamorphosis necessary to obtain the final product. Finally, the cycle closes with the use of the fermented product as medicine or again as a principle of fertility and breastfeeding.

Another legend belonging to the Kui Gaani says that Nirantali planted the first palm tree on the sacred hill of Sopangada which the Kond believe to be the center of the world. In this truly existing place that I had the opportunity to visit, there is a sort of cave in the ground where it is said that the first beings came into the world, metaphorically coming out of the womb of Mother Earth. A red squirrel, or rather an Indian giant squirrel (*Ratufa indica*), is said to have been the first to bite the tip and the flowers, causing the juice to flow underneath and be collected and thus discovered by the first men.

Among the Saora of Rayagada, it is said that in the beginning, men and animals were plagued by all sorts of diseases and sufferings. A man therefore went to the deity Kittung to ask for a favor and the deity consecrated him as a medicine man, giving him a winnowing fan for husking rice and a clay jug for harvesting *salap*. These two tools, whose function is strictly linked to productive activities and agriculture, are still widely used today in the shamanic ritual of the Indigenous communities of these areas. According to legend, the first shaman learned to exorcise evil and cure diseases by making oblations of palm wine to the spirits of the forest. Interesting in this context is the figure of Kittung (or Kirtun), who was a sort of primordial divinity, or cultural hero, in the local cult of the *sonum*, or ancestral entities dominating the traditional Saora cosmos. Almost forgotten already in the second half of the 20th century, he was dusted off ad hoc by Catholic missionaries who adapted him to the figure of Jesus, in an attempt to translate Christianity into terms more understandable to the local villages. In hindsight, it was in fact consistent that during the celebration of the Eucharist, in the Holy Mass, the divinity offered a certain substance—which later turned out to be basically wine—to his devotees, as a sign of alliance, for their salvation and as a testimony of consubstantiality between human and divine.

Another legend tells of a primordial female form of the divine, called Sitaboi (perhaps a borrowing of the Hindu Sītā) who is responsible for the discovery of agriculture, and

who had multiple births generating seven daughters. These were the seven palm-sisters destined for the secretion of latex of which the eldest was the *Caryota urens*. When the first shaman found the placenta that Sitaboi had buried, he decided to keep it for himself as a sacred relic. It was at that moment that the palms began to secrete their sap and the man inherited the secret of the use of wine as medicine. In these stories, the themes of fertility and breastfeeding are clearly linked to the practice of shamanism and the theme of healing.

Legends of this kind are very common in the area of my study, they are part of the infinite wave of an oral culture capable of metamorphosis, transformation and adaptation to the subject and to the changing times. What has always intrigued me however is that at a semiotic level, some cultures perceive languages and signs in the surrounding nature as carriers of meanings that are normally invisible to those who come from the outside [65]. To give an example, the complex tangle of voices and songs of birds not only constitutes an intense exchange of messages between animals (danger, control of the territory, availability of mating, etc.) but, as a soundscape of a certain territory, it is perceived by the natives as a sort of musical timbre conveying the sacredness of a certain place. As in many cultures, understanding the language of birds is a metaphor for the knowledge of initiatory or doctrinal secrets, so also in the shamanic world, the communicative code of birds is understood as a sort of lingua franca between those (generally non-humans) who are able to move in a uranic, aerial, rarefied dimension. These are precisely birds, insects, but also spirits, deities and the soul of the shaman during trance. The discovery of the *mahuli* or *salap* can be traced back to the story, interpreted differently depending on the area, of a shaman who had noticed an anomaly in this soundscape. Sent by the gods in search of medicinal principles to bring relief to humanity, he noticed a sort of dissonance in the birdsong as he approached the heart of the forest. Finally arriving at the right place, he saw that many different species of birds, gathered around a hollow tree containing the sacred nectar, were nodding their heads, completely drunk on the substance. The theme is very interesting because it intertwines the intoxication of animals—which seems to be not merely metaphorical or symbolic, but an empirical fact [66,67]—with the altered state of consciousness of the individual that clearly alludes to an elevation of his cognitive and spiritual level. The myth strongly expresses the concept according to which the presence and power of the psychoactive substance is perceptible even only through the soundscape: the plant communicates extraordinarily with those who know its secrets through the sounds of the territory and the calls of animals.

3.3. The Mysteries of Fermentation and the Magic of Making

Caryota urens takes a while to reach maturity, starting to produce after at least 10 years of growth. Typically, to obtain the fermented juice, the fruits or the sap exuded from an incision made on the top of the trunk or on the branches near the inflorescence are used (Figure 1). Normally, the product is boiled and then fermented by adding natural starters. But as also testified by the legends, given the hot tropical climate of the area, fermentation can start spontaneously in the jugs hung on the trunks to collect the juice [68]. *Madhuca* takes a similar amount of time to reach maturity and bear fruit, however, the preparation of *mahuli* instead involves the collection of flowers between March and April: these are stored and dried and can already be used for various purposes and recipes. To prepare the distillate, it is necessary to soak the flowers in a terracotta pot for a few days. A second one is placed on top of this in an opposite position which acts as a condensation chamber when the mixture is heated with fire. The *mahuli* drips through a pipe attached to the top jug that acts as a still, and finally, the liquor is collected in a third outer container [69]. When the *salap* or *mahuli* are ready they can be used for ritual or recreational use, but today a good

quantity is sold at the market or along the roads that lead from the hilly jungle areas to the lowland towns.

Figure 1. Collection of salap palm wine, Rayagada, Odisha.

In my opinion, one of the most intriguing and mysterious aspects of the whole process consists of the application of traditional fermentation starters. There is a certain recent interest in the study of this practice because fermentation is clearly the basis of food preservation and the techniques applied by Indigenous peoples of the forest, in the absence of technological support and in often extreme survival conditions, have not always been documented. It is interesting to note that each area and each Indigenous group seems to have its own traditional recipe, involving the preparation of the so-called *ranu* tablets, or balls a little larger than an olive, obtained from a mixture of rice flour which accounts for a good 50% of each tablet, with a series of different ingredients such as seeds, roots, barks etc. comprising the rest of it. There are a number of such tablets commercially produced and available now, but until recently it was a home-made product with often secret components. Among these, some are merely flavoring, others contain the load of bacteria or yeasts necessary for the process, and others are mysterious and variable ingredients that however have different medicinal properties [70]. In a recent research, I wrote [10]:

> *Among the species most commonly used by the tribal groups of Jharkhand and Odisha are Asparagus racemosus, Cissampelos pareira var. hirsuta, Clerodendrum serratum, Coccinia grandis, Holarrhena pubescens, Smilax macrophylla, Woodfordia fruticosa and*

> *Rauwolfia serpentina, etc. Overall the botanical ingredients can be 20 or 25 depending on the season and availability in each particular location. The medicinal uses, based on the active ingredients most frequently available in the literature, are the most varied. From some barks, antihelminthic and antipyretic are obtained to treat dysentery and worms (Holarrhena pubescens), or gastric disorders (Homalium nepalense). The aforementioned Asparugus, known in Sanskrit as Śatāvarī, was already used in Ayurvedic and Unani medicine for its tonic and nutritional properties and to treat typical symptoms affecting the female reproductive system. Among the Sapotaceae, there are also fruits (Xantolis tomentosa) with antiseptic and digestive properties. The root of Rauwolfia serpentina is used (also by indigenous South American populations) to treat malaria and snake or scorpion bites. The seeds and leaves of the mohua itself are used to produce an oil for use against rheumatism and to combat diabetes. The aforementioned "velvetleaf" Cissampelos pareira is applied as an anti-inflammatory for kidney and urinary system problems, but also against coughs and respiratory diseases. In this way, it will be clear how the concept of ranu merges the principle of transformation of liquids into alcohol with the idea of a sort of panacea for all ills.*

Moreover, today I can add some notes on *Plumbago zeylanica*, a species of plant of the Plumbaginaceae family, known in Sanskrit as *citraka*. Its use in the recipe for *renu* is widespread with a certain frequency in the hill tracts of Odisha. According to Caraka, an Indian doctor who presumably lived in the first centuries BC, to whom the classic Ayurvedic work Carakasaṃhitā Sūtrasthāna is attributed, some parts of this plant were edible as they belong to the group of medicinal *śākavarga*, or the group of vegetables/aromatic herbs, classified according to the dietary value of the plant [71]. In Ayurveda, *Plumbago zeylanica* is indicated as an antipyretic in the first chapter of the seventh-century AD Sanskrit work Mādhavacikitsā on the treatment of all major fevers. It is a very widespread plant in India, which has also been given the English nickname "doctorbush". Among the other components of *renu* tablets, *Wattakaka volubilis*, belonging to the Asclepiadaceae family, and *Vernonia cinerea*, also known as purple fleabane, have been reported by my informants with some frequency. These last three ingredients have an important history of use in traditional medicine in many Asian countries: thanks to their phytochemicals bioactive compounds such as alkaloids, flavonoids, tannins, glycosides, anthocyanidins, they have different properties such as mainly antioxidants, anti-inflammatory, analgesic, antipyretic, antimicrobial, but also antitumor, antidiabetic, etc. [72,73].

Coming to the psychoactive ingredients, these are generally not present since the fermented or alcoholic distillate is already psychoactive in itself. Nonetheless, the addition of ground *ganja* inflorescences (*Cannabis sativa*), i.e., the part containing delta-9-tetrahydrocannabinol (THC), has been reported very sporadically. More frequently I found the addition of small quantities of ground datura seeds (*Datura metel*) [74].

For the sake of completeness, it is necessary to document that *Caryota urens* and *Madhuca longifolia* also have other edible and medicinal uses. For *kithul*, the main production is still wine, but associated with it are sugars and caramel residues used to obtain syrups, while the buds and young leaves can be cooked and eaten. These have a sour taste and, in theory, the treatment is not convenient since such a harvest kills the tree, not being able to produce lateral shoots, and therefore it can no longer grow. Nevertheless, a paste prepared with the seed flour is prescribed by shamans to treat gastric ulcers, migraines, poisoning from scorpion or snake bites and rheumatic swellings. The root is used to treat tooth and gum problems while a decoction of the bark is used to treat skin problems [75,76]. The fragrant flowers of the *mohua*, on the other hand, can be eaten raw or cooked or used as a sweetener because they are rich in nectar and sugars. These inflorescences, especially the cotyledons which are the fleshiest part, can be dried and ground to obtain a powder

that can be added to flour. Even this solid use, in high quantities, can have an inebriating effect, so the plant could have a psychoactive function even outside the fermentation and distillation process. The fruit and leaves are considered edible as is the oil extracted from the seed, which is used as a substitute or adulterant for ghee or Indian clarified butter. The flowers are considered anthelmintic, cooling, emollient, laxative and tonic. They are used in the treatment of coughs, colds and bronchitis and in the treatment of snakebites. Edible oil and a bark decoction are used as a soothing anti-inflammatory and for dermatological problems [77].

Returning to the social impact of an increasingly massive processing of the psychoactive product obtained from these substances, it will be clear for the aforementioned reasons that the ownership or patronage of productive plants significantly affects the economy of the villages (Figure 2). Many clans claim the right to usufruct certain trees or the exploitation of plants that are found in a certain territory. Monitoring the phenomenon is quite difficult today because much of the production is outside the control of the institutions and the processing is illegal. Institutional data are not always consistent and up-to-date [78,79]. For example, it is estimated that India produces 45,000 Million tons of Madhuca flowers every year, 90% of which are used in the production of psychoactives. This market provides work to approximately 7,500,000 people, mainly women and children from the central-eastern states of India (only considering Bihar, Andhra Pradesh, Chhattisgarh, Odisha) involved in the collection of flowers and impacts about a third of the economy of Indigenous villages [80]. The same can be said for palm wine which, beyond the central regions, is more widespread and used in the southern states of the Indian subcontinent (Tamil Nadu, Kerala, Karnataka). During the colonial period, the British Raj had banned the production of homemade alcohol, to favor the interests and taxation of government spirits. Similarly, the sale of alcohol was seen by many leaders of Indian nationalism as one of the symbols of European colonialism and was therefore opposed even before Independence. So much so that Mahātmā Gandhi, advocating vegetarianism, called for absolute prohibition. Incomprehensible to indigenous ethics, this stance was always a difficult problem to resolve in Congress propaganda among tribal people because it essentially opposed basic elements of their relative way of life [81,82]. On the other hand, the government's position is not very different at present: according to many [83], the Indian state, by acting as a guarantor of the health of its citizens, and therefore substantially contrasting the risks of abuse and home production, would, in reality, be masking its interest in controlling and monopoly on a production that is still far from being nationalized.

From the point of view of the Indigenous villages, the government's attitude would be excessively paternalistic [84] and fail to recognize the sacred and traditional value of the production processes of psychoactives as an integral part of the intangible cultural heritage of the Scheduled Tribes. Furthermore, it would be honest to recognize that in the poor diet of the *ādivāsīs*, alcohol has been on many tragic occasions the only alternative in the struggle for survival of men, women and children in periods of particular food shortage or famine [85]. This has meant that homemade fermented and distilled products were universally recognized as a positive resource and as healthy products, being in many cases the basis of the traditional diet of many communities [86,87]. Not to mention that in the districts where the distribution of low-cost industrially produced alcohol was introduced, this proved to be much more dangerous for the health of the natives and triggered degenerative processes of abuse, addictions, related pathologies, indebtedness and general degradation [88].

Figure 2. *Ādivāsīs* bring palm wine and other products to the local market, Kandhamal, Odisha.

4. Discussion

In my more than 20 years of experience in the anthropological and ethnographic study of the shamans of the Indigenous peoples of India, I can conclude that in a ritual context, the use of psychoactive substances such as fermented and distilled products is a fundamental trait, just as it is possible to affirm that the production of homemade alcoholic beverages is a salient characteristic for a large part of the *ādivāsī* cultures. It is also possible to document different variants such as *handia*, obtained from the fermentation of rice, or as *paise*, from the fermentation of *rāgi*, the so-called Indian millet (*Eleusine coracana*). The names vary according to the area, just as the use of wheat, potato, milk, or other peculiar plants of the forest is widespread in many regions, including the entire Himalayan range. In the case study of Odisha, it is worth mentioning that besides *salap* and *mahua*, great importance is given to the tobacco plant (*Nicotiana tabacum*). Not native to India, tobacco was imported by the Portuguese in the colonial era in the early 17th century, but it can be said that it has in a sense become naturalized as a national production. In Odisha, once again, it is the *ādivāsī*-inhabited forest tracts of Rayagada, Koraput and Nabarangpur districts that are the major production centers of the so-called *pikkas*, or country cheroot [89,90]. These have a crucial economic importance in the markets between the forest and the inhabited centers of the plains (Figure 3), moreover, in the Indigenous tradition, they are used in parallel to the ritual use of alcohol in rituals. There are countless myths connecting the tobacco plant to the gods, to the world of the dead and to shamanic deeds, so much so that it is not possible to deal with them here, deserving a separate study that I hope to be able to carry out in the future.

Starting from this premise, the first important conclusion that can be drawn is that psychoactive substances are not normally used by the shaman to reach a state of trance. The topic is very interesting, and I can bear direct witness to it since my emic perspective has led me in numerous cases to develop a sort of 'observant participation'. Having been involved in first-person shamanic rituals, I have documented the inclinations and attitudes of the ritual operator, having to abide by certain prescriptions myself as a participant observer. In the period preceding each session, among the Saora and among the Kond, it was recommended to all participants to abstain from anything that could significantly

influence the psychophysical state of the individual, with particular attention to questions of ritual purity. Therefore, contact with anything that could be generally understood as contaminating was to be avoided, but also situations of liminality or transformation that would present a danger of intrusion of subtle entities from other planes of existence. This idea of impurity inherent in moments of change is also widespread in Buddhist or Hindu rituals [48]. Incidentally, it is necessary to avoid approaching cemeteries or cremation sites, people suffering from illness, human or animal corpses, pregnant women or women during their menstrual cycle, and so on. A purifying diet is generally prescribed, it can be more vegan than vegetarian, sometimes reaching the recommendation of absolute fasting. Alcohol and tobacco, being sacred substances, cannot be consumed for recreational or fun purposes, when instead they will be used in a sacred context. This is an absolute prohibition, which is usually lifted when the deity manifests itself. It is possible to say that, however the spirits and deities manifest themselves through the body of the shaman and the phenomenon of possession, but only once the trance is reached. This is a fundamental point. Therefore, as mentioned above, even in these case studies, the shaman and his/her assistants begin to circulate the substance only once an altered state of consciousness is achieved through other channels. These methods, once again, are to be found in a sensorial overstimulation whose keystone lies in the music and the celebrated liturgy. In the case of the Indigenous peoples mentioned, the "musical instrument" in particular is the winnowing fan. An agricultural tool for cleansing rice and cereals, in the shamanism of mainland India and in some areas of South East Asia it is transformed into a divination device or a sort of small portable altar. When swung rhythmically it serves as an idiophone instrument guiding the shaman's ritual gestures towards trance. In the abovementioned legend, in fact, the primal deity gave the winnowing fan and the jug of psychoactives to the first Saora shaman, as the main instruments for freeing the world from evil. However, with due cultural variations, the entire dynamic can be witnessed very coherently also in other regions of India and the Himalayan area.

Figure 3. *Ādivāsī* women testing the quality of tobacco at the local market, Kandhamal, Odisha.

I think it is also important to add that, if it is true that during the collective consumption of psychoactives the state of consciousness of the group becomes increasingly altered, as for example, during funerals or in collective ceremonies related to agriculture or spring

festivities, the shaman remains predominantly resilient to the effects of the substance. This peculiarity is generally explained by the fact that the shaman is possessed by deities who have control over the substance and therefore do not react like the common man. This same principle of divine presence is used to justify bizarre and anomalous behaviors, as well as explosions of strength or superhuman abilities that the shaman occasionally manifests during the ritual, and which could be in a certain sense adduced as a side effect of the substance itself. In many sessions I attended, the shaman was then possessed by different entities consecutively and therefore was called to take psychoactives in quantities to satisfy each of the subtle manifestations. In many cases he/she seemed incredibly resistant to the effects of the substance, only to then suffer the blow immediately when coming out of the dissociative state. At the end of the trance I have witnessed on several occasions fainting on the ground, collapses, veisalgia as in a state of hangover, conjunctival and facial redness, abundant tearing and general exhaustion as if after an enormous psychophysical effort. It is not uncommon for a shaman to need a few days to recover after particularly demanding rituals.

The above-mentioned particular management of the altered state of consciousness, which also confirms a certain disciplinary theory on the originality of certain practices of Central Asian shamanism, certainly does not undermine the central importance of psychoactive substances in native cultures and their rituals. Indeed, with this paper, I hope to have demonstrated how substances are a privileged gateway to explore the traditional knowledge of these peoples. *Salap* and *mahua* (with the interesting variant of the addition of *ganja* or datura) become, in this case study, the interpretative key of the cosmogonic myths of the Saora and the Kond. Moreover, their use confirms the entheogenic theory of the consubstantiality of the triptych of man-substances-nature/divinity, becoming metaphors of the ontology of the shamanic cosmos. Last but not least, the pharmacological and therapeutic properties that can be present alongside the psychoactive principle in the botanical agent in question, unfold the theme of Indigenous pharmacopeia, and that intangible heritage that today in India is defined as Indigenous knowledge of the forest. As in similar Amazonian scenarios in South America, as well as in various other places in the world, the psychoactive effects of some plants considered 'mothers', merge with principles of somatic therapy confirming a certain holistic approach to the very theme of care and well-being of the individual and the community. Purging this analysis, based on objective cultural facts and phenomena, from any risk of exoticization or romanticization, I believe that the Indigenous example also implies important considerations regarding the concept of sustainability of lifestyles and the communication of the individual with the environment and the surrounding territory.

5. Conclusions

In this long dissertation, many points of interest and models for future development have emerged. First of all, it has been sufficiently demonstrated that the study of psychoactives has been unjustifiably compromised for a long time by criticism and social stigmas. In contrast, periods of exaltation, idealization and misinterpretation of the problems followed. The result is therefore an extremely complex state of the art in which the scholar, with particular reference to the Humanities, tries to extricate himself as if from a minefield. Each source must therefore be evaluated and related to the historical moment and cultural context in which it was conceived. The relationship between the use of psychoactives and religious experience is also particularly relevant in this investigation. The numerous case studies provide innovative data regarding the discipline of shamanic studies. Contrary to what one might believe, psychoactive substances may play a fundamental role in the ritual achievement of altered states of consciousness, but it is also true that in many contexts,

especially Asian ones, trance is achieved through other non-pharmacological methods such as music or other mechanical sensory overstimulation. This does not affect the sacredness that psychoactive botanical agents have in many Indigenous cultures: such potency is intended to be potentially absorbed by humans, non-humans or other than humans (spirits). Here, therefore, psychoactives, or entheogens as they have been called to emphasize their connection with the divine, become the trait d'union between the community and the cosmos surrounding it. From a cognitive science perspective, this is the result of the substance's potential to deconstruct the individual's relational set, allowing for a loss of the sense of ego, through sensory alterations and intense imaginative experiences. This is usually counterbalanced by an increase in awareness, an introspective attitude whereby the deep Self unites harmoniously with the rest of the world, giving greater perceptive sensitivity to all the senses, because it dissolves the limit that usually confines it from the rest of the cosmos. Until now, the study of indigenous forest knowledge, pertaining to the use of substances, has been considered valuable for various approaches of the Hard Sciences, namely indigenous pharmacopeia, medicine, botanical knowledge, fermentation and food preservation techniques. However, this study, with its paradigms drawn from anthropological and ethnographic field research, demonstrates how the study of substances is a privileged interpretative key for a general understanding of the cultures, cosmologies and religions of native peoples. In addition, the study of psychoactives reveals in particular the ethical principles of the relationship between the individual, community and environment in these same cultures. This interconnection can today suggest important tools for rethinking concepts such as environmental sustainability, respect for nature and a sort of empathy with the planet on which humanity lives. For these reasons, the multidisciplinary approach proposed by this journal is to be considered pioneering and of crucial importance.

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