

# Indigenous ayahuasca ceremonies in the European context: structures, purposes, concepts

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## Abstract

Psychedelics are currently being studied intensively for the treatment of various psychiatric disorders. Ayahuasca, a plant-based extract originating from the Amazonian area, is traditionally consumed in ritualistic group events. The related indigenous traditions date back hundreds of years and have amassed vast amounts of knowledge on the therapeutic use of psychedelic and non-psychedelic plant-based substances.

These traditions require a prospective ceremony facilitator to undergo years of intensive training to acquire knowledge, mental power or self-confidence, stability, sensitivity, intuitive treatment outcome prediction skills, musical skills, and sufficient physical strength. These qualities of a facilitator, in the presence of integrity and love, largely determine treatment outcomes.

In Europe, predominantly in the first decade of the 2000s and in the early 2010s, some individuals began building connections with diverse indigenous groups and syncretic churches of the Amazonia in an attempt to find cures for their treatment-resistant psychiatric conditions. Small circles of other patients in need of similar treatment formed around them. This led to the formation of decentralized, diverse local ceremony cultures that either followed the principles of the traditional lineages of their origin or synthesized various influences.

These unofficial ceremony contexts appeared to complement official healthcare systems, offering efficient methods unavailable in the medical context and correcting the consequences of medical malpractice and neglect. These ceremony contexts appeared highly communal, were largely based on volunteering, and contained mechanisms for self-correcting possible emerging issues. They seemed to function as systems for collecting, preserving, storing, and distributing knowledge of psychedelic therapy methods; in other words, systems for knowledge base building and innovation.

*Keywords: psychedelic therapy, group therapy, ritual, ayahuasca, C-PTSD, PTSD, retraumatization, anxiety, treatment-resistant depression, medical malpractice, medical ethics, sexual misconduct, innovation, knowledge transfer*

## Introduction

Based on ethnographic observation of a small, selected subset of European ceremony contexts between 2017 and 2022, this study provides perspective on the societal role of psychedelic ceremonies utilizing ayahuasca in the care of treatment-resistant psychiatric conditions. It also aims at explaining some of the concepts and practices of the described contexts.

The use of Amazonian psychedelic plant-based brew ayahuasca has spread internationally in the 2000s [1, 2, 3, 4, 5, 6, 7, 8]. Its effects are mostly due to the monoamine oxidase inhibitors (MAOIs) harmine, harmaline, and tetrahydroharmine, as well as N,N-dimethyltryptamine (DMT). An important mechanism of action may be anti-inflammatory. Flanagan and Nichols noted that psychedelics regulate inflammatory pathways via novel mechanisms, producing potent anti-inflammatory effects [9].

Ayahuasca is typically used in ritualistic group settings in which trained psychedelic facilitators direct participants' experiences by singing. In European societies, ceremonies typically happen overnight during weekends, beginning on Friday evening and ending on Sunday morning. Participants usually present with treatment-resistant psychiatric conditions such as treatment-resistant depression, post-traumatic stress disorder (PTSD), and complex post-traumatic stress disorder (C-PTSD), and have exhausted other, official options for treatment.

Kaasik et al. analyzed the chemical composition of traditional and analog ayahuasca [10]. James et al. recently provided a narrative review about the current status of medical ayahuasca research [11]. Group therapy and communal aspects were discussed by Hartogsohn [12, 13], Gonzalez et al. [14], and Meckel Fischer [15, 16]. Aspects related to trauma and dissociation were discussed by van der Hart [17]. General aspects of the use of psychedelics in psychotherapy were discussed in a recent book edited by Read et al. [18].

O'Shaughnessy and Berlowitz studied the 'plant diet' practices of Peruvian Amazonian medicine [19]. Stiperski Matoc et al. described ceremony practices in Peruvian Amazon [20]. Callon et al. discussed ayahuasca ceremony leaders' perspectives on preparation and integration practices for participants [21]. Kettner et al. noted that intersubjective experience during psychedelic group sessions predicted enduring changes in psychological wellbeing and social connectedness [22]. Pontual et al. studied the importance of non-pharmacological factors such as setting to induce or promote mystical experiences or challenging experiences among ayahuasca users in neoshamanic and syncretic church contexts in the Netherlands and Brazil [23]. Durante et al. described self-reported risk factors and adverse effects of ayahuasca use in a religious context [24]. Kaasik described ayahuasca ceremony culture in Estonia [25]. Wolff and Passie presented an online survey (n=40) of ayahuasca drinkers [26]. Ambrosini et al. noted that there were no differences in ceremonial setting between Colombia and Italy [27]. Bathje et al. presented a qualitative study of intention and impact of ayahuasca use by Westerners [28]. Ona et al. described the essential features and benefits of traditional practices and the importance of incorporating them into a 'Global Mental Health' movement [29].

Fotiou warned against idealizing South American indigenous tribes [30], but also argued for the abandonment of the privileged position of the scientific paradigm, suggesting that there was a need for a new paradigm that acknowledged the validity of indigenous worldviews as equal partners to scientific inquiry [31].

Turkia previously presented a detailed retrospective case study about ceremonial ayahuasca in the treatment of long-term early childhood sexual abuse and bipolar disorder with psychotic features, noting that it was a feasible and beneficial approach in the discussed case [32].

Many kinds of ayahuasca ceremony contexts of varying quality exist. Perhaps the most organized are the ones related to syncretic churches such as Santo Daime [12]. Their approaches are quite demanding of the participants, requiring them to be able to sit up and sing pre-rehearsed songs for 5-6 hours (occasionally for 8-10 hours, with an one-hour break in between). In Europe, these ceremonies usually include a 'healing space' for people who need to lie down. Regardless, these religious practices are not intended for and largely unsuitable for people suffering from serious conditions and exhaustion who lack the energy and skills to participate in the accepted manner.

Kaasik and Kreegipuu presented a case-control study with 30 participants and 30 controls [33]. The interviewed participants had participated in neoshamanic contexts, Santo Daime, indigenous contexts, or consumed ayahuasca on their own. Their level of experience varied from facilitators to first-timers. They perceived their use of ayahuasca as a reasonably safe and self-limiting form of spiritual practice, with mostly favorable outcomes for their health and lives. Depression, anxiety, social phobia, and sleep disturbances were statistically significantly lower in the participants.

On the other end are ceremonies organized by people without any formal training and with little experience about the substance. In addition, some of these kind of organizations have appeared to be largely directed by business interests. While psychedelic experiences in such contexts may still be beneficial for many, quite often they are not.

The contexts described in this study adhered strictly to Amazonian indigenous lineages and contained no neoshamanic elements. The number of observed individual participants was difficult to estimate in retrospect, but likely between 200 and 300. The contexts described in this study may be considered high-end, and as such possibly untypical and unrepresentative of the field as a whole. Also the set of participants was likely untypical. The perspective is obviously narrow and somewhat subjective. The intention behind this study was to describe well-functioning arrangements, which does not mean that they were perfect. Regardless, they represented decades or centuries of knowledge acquired on the subject.

## Materials, methods, and limitations

This research was based on unstructured ethnographic observation of six different ceremony organizing groups operating in Europe during a period of five years between 2017 and 2022. Observations included informal discussions with organizers, guides, and attendees. There was no formal data collection, systematic documentation, or statistical analysis. Data collection was predominantly memory-based. Where materials existed, due to the protection of anonymity, they have been destroyed. Comparisons between ceremony contexts and conventional psychiatry and psychotherapy were based on the author's thirty-year informal observation of various psychotherapeutic and psychiatric methods and organizations.

The observed contexts feature a very small subset of the European ayahuasca ceremony culture as a whole. They may also differ significantly from most contexts in that they were led by well-trained indigenous guides or non-indigenous guides trained directly by the indigenous. The observation period, approximately five years between 2017 and 2022, ended 1.5 years before the writing of this study. The situation may thus have changed significantly after that.

Concerning treatment outcomes, the unsystematic, memory-based nature of data collection did not allow for a detailed description of outcomes. Some summarizing observations may be provided. Estimations of outcomes were based on personal discussions, on statements shared in post-ceremony 'sharing circles', and on visual and intuitive estimation based on experience of typical trajectories of outcomes when left untreated or treated with conventional methods, with individual psychedelic therapy utilizing synthetic psychedelics, and with ceremonial ayahuasca.

## Organizational structures

Twelve two-night ceremonies and one single-night ceremony (25 nights) in four different countries were included in the observation. A ceremony context typically consisted of: 1) invited visiting guides who were either indigenous or had undergone the same training, with one exception; 2) local non-indigenous organizers, who often were also apprentices to the guides; 3) local assistants or 'helpers'; and 4) participants.

Eleven ceremonies adhered to a specific Amazonian indigenous lineage (L1). Four ceremonies adhered to another Amazonian indigenous lineage (L2). However, cooperation and alliances between traditions were common. In three L1 ceremonies, a guide from South American syncretic ayahuasca church S1 was present. In two L1 ceremonies, an assisting guide from traditional lineage L3 was present. In one L2 ceremony, an assisting guide from another South American syncretic ayahuasca church, S2, was present. Some alliances were transient, while others were permanent. If cooperation between guides was not harmonious or if friction among guides or between guides and organizers emerged, alliances were broken up. All in all, the sample included twelve guides working with ayahuasca.

Two L1 ceremonies were organized by two different women working on their own. All other ceremonies were organized by male-female couples. The organizers were in their late thirties or early forties, except for one in their early sixties. Approximately a third of the organizers had university degrees. One organizer traveled between countries, while the others were specific to one country. However, many organizers were also considered apprentices and often visited ceremonies in other countries in that role.

Guides were responsible for ceremony practices and treatment. The number of visiting guides varied between one and six, with an average of two and a median of two. In addition to guides, one to three apprentices were usually present. Apprentices often functioned as local organizers who were responsible for the space, food, accommodation, and transport. They were assisted by two to six support persons, or 'helpers'. The role of helpers was to assist participants in practical issues during the ceremony (e.g., going to the toilet, providing support in case of difficult emotional experiences, etc.), and to keep the space clean and organized.

With regard to decisions on what and how to do in the ceremony, the structure was highly hierarchical, with experienced guides on top, apprentices following their instructions, and helpers following the instructions of guides and apprentices. During the ceremony, interactions between participants were to be avoided completely, and all communication was conducted through helpers and guides.

The education required for leading ayahuasca group sessions took several years and was typically harsh, perhaps more closely resembling special forces military training than conventional medical education, at least in the case of the majority of the observed guides. It involved multiple 'plant diets' of varying durations with various plants under nearly full social isolation and malnutrition. The duration of a single diet varied from a few weeks up to a year. In some cases, guides were required to repeat a one-year diet twice before their development was considered sufficient.

The essential information about the properties of the ingested plants and plant brews, including ayahuasca, was acquired through an embodied method. The effects produced by the medicinal plant extracts were learned by feeling them in one's own body. The diets typically forced a prospective guide to face their unresolved emotional and somatic issues, a process that could be experienced as unbearably painful and exhausting, approaching a near-death experience for some.

The embodied method aimed at sensitizing the person to and familiarizing the person with the somatic and mental effects of the plants, building an intuitive understanding of their effects and applicability—a practice or skill perhaps unfamiliar to European medicine. This skill appeared to be largely based on reflexive, immediate pattern matching between one's own embodied experiences and observations of others' somatic and mental states. As a result, a guide was, without much conscious effort, typically able to intuitively estimate the suitable method and dosing for each participant.

The number of attendees was 30 on average and typically varied between 20 and 40. The average age was around 30 years, and there were approximately equal numbers of males and females. In two ceremonies, there were 15 and 50 attendees. The ratio of guides and helpers versus attendees typically varied between one to three and one to five. Most attendees were local, but some ceremonies included attendees from other European countries, occasionally also from the United States or the Middle East. People traveled abroad to join a ceremony led by specific guides, either in order to continue their process with the same guide or to meet a guide that had been recommended by people they knew and trusted. Due to relatively short distances, traveling to another country was common in Central Europe.

The decision on who could attend was based on a decentralized, multi-step, bidirectional process. As the existence of these contexts was not public information and could not be found with conventional methods, participants were primarily selected by previous participants. Attendance was based on experienced or expected benefit.

A common observation is that people with similar qualities, in this case, similar psychological issues, tend to intuitively cluster or attract each other in an attempt to resolve their issues together. If one of them makes progress with some method, the others also adopt and test it. Ayahuasca use thus tended to spread circularly from a starting point, first to the acquaintances of the organizer, and then further on to the acquaintances of the first-order participants.

At each point of connection, there were multiple considerations to take into account. After experiencing one or more ceremonies, a participant usually acquired an intuition about suitable uses and indications, as well as limitations and possible problems. In deciding who to tell about the method, participants usually took great care in estimating who could benefit and who did not pose a risk to the community. Invitations thus tended to be on the very conservative side, and the communities stayed small and relatively closed.

The observed high efficacy was largely based on this kind of selection: participants who had benefited invited others who were similar to them and could thus also be expected to benefit with high probability. Typically, invitations were considered solely for people with serious issues, with no other treatment options available. When there was too much dissimilarity or distrust, information about these contexts was not made available. Thus, evaluations of suitability were typically made before releasing information on the possible availability of the methods.

The pre-selection by participants was supplemented by a discussion with the organizer. If the organizer considered a prospective attendee suitable with respect to motives, goals, intentions, personality, issues, and counterindications (e.g., SSRI use), they were allowed to participate and were delivered more detailed written instructions on how to prepare and what to take into account.

Another aspect was the selection performed by prospective participants themselves. As many had extensive experience with treatments that had not helped and people who could not help, they appeared skilled in excluding methods and people with characteristics associated with previous unhelpful experiences and could thus decline to participate at any phase of the process.

The events happened in low-cost venues, sometimes partly outdoors, with accommodation on mattresses in shared halls or rooms, in the ceremony space, and occasionally in tents, with participants bringing their own bedsheets or sleeping bags. In many cases, the ceremony locations were quite uncomfortable due to low temperatures at night.

The lineages emphasized the importance of singing in guiding participants' experiences (see, e.g., [34, 35]). The healing effect was thought to reside in specific affects, tones, or vibrations that needed to be matched with the participants' needs and changed dynamically in response to changes in group dynamics, in a similar way to a DJ matching the music in a club to the participants' ages, tastes, expectations, and moods. This skill of matching was acquired as part of the extensive education period. The guides continuously observed the group as a whole and on a per-individual basis, adjusting the environment as needed.

The maintenance of a proper, efficacy- and safety-ensuring group dynamic was thus predominantly the result of singing. The observed musical skills of some of the guides appeared exquisite, with an unusual prowess to project, for example, an image of mental strength to recipients, which the recipients could then identify with in order to overcome difficult emotions. As many of the states experienced in ayahuasca sessions were regressive in nature, the role of the guide resembled the role of a mother or a father singing to a child with similar intentions (e.g. calming, uplifting, or energizing).

Before the ceremonies, there was a short presentation covering a brief history of the tradition, principles of the work, properties of the medicines, and instructions on practical issues such as food and accommodation, as well as more detailed instructions about behavior during the session. Usually there was also a 'sharing circle' with a duration of one to five hours, with an average of two hours. During sharing, each participant could describe their background, expectations, and intentions. The guides could provide personalized feedback and instructions. Participants were not allowed to comment on or react to each other's descriptions. The guides estimated the participants' situations, in addition to conventional methods, by careful listening to the affect in participants' voices.

Typically, a ceremony was initiated after sunset (around 10 p.m.) and lasted until the morning (around 8 a.m.). Participants could lie down on yoga mats or sit up according to their preferences. They were instructed to turn inward, avoid making noises, and avoid all interaction except when and where explicitly allowed. They were especially warned against 'helping' other participants. The rationale for this was that everyone needed to go through their own individual process, and the participants were not competent to guide other participants; that was the role of the guides, and as instructed by them, the role of the designated helpers. Also, the need to 'help' was said to typically originate from selfish intentions such as feeling helpless or becoming scared; the participants were instructed to process these feelings in themselves.

After a tradition-specific opening ritual, medicine was administered in the front of the room, where the guides, apprentices and helpers were sitting. Participants approached the guides and were administered an initial dose, which was personally adjusted according to the level of experience and the needs and intentions of the participant. Dosing was thus based on intuitive experience and varied between psycholytic ('psychotropic' combined with 'analytic'; approximately a half or a third of a 'regular dose'; see [36]) and 'regular'. High dosing was available at one ceremony for selected experienced participants with high tolerance for the effects.

Before the ceremony, the guides had tested each batch of ayahuasca on themselves. In the ceremony, they consumed psycholytic doses of it. This practice was also recommended by Meckel Fischer who, after leading group sessions both with and without consuming psychedelics herself, concluded that without them she was unable to properly observe

the participants' states and direct them [15]. Another way to express the issue is that the situation would revert the balance of power: due to sensitization by the psychedelic, the participants' observational capabilities would exceed the capabilities of the guide.

After a brief period of silent meditation, the singing began. Traditionally, the singing or chanting had not been augmented by musical instruments, but recently the instruments had become an integral part of the ceremonies.

Reactions to the substance typically emerged after 30 to 120 minutes. They were individual, depending on participants' life histories (i.e., the type and degree of traumatization). Some participants could see psychedelic visions, while others had no visions but embodied experiences instead. As an example, one type of effect involved shaking of the body that could become synchronized with the music, with the participant feeling as if the body was able to predict changes in the music, although the music was previously unknown. Some participants experienced vomiting. Ayahuasca-induced states were said to be externally controllable by guides. An overwhelming experience (e.g., as a result of excessive dosing) could be toned down by the guides [35, chapter 6].

Concerning visions, according to the lineages, in order to ascertain the truthfulness or information value of a vision, one needed to be mentally stable. As most participants were not yet stable, the best course of action was to ignore most of these visions; the essential information was instead better searched for in the somatic sensations of one's body. In the Zen Buddhist tradition, visions were considered 'maky': the realm of demons, a self-delusion resulting from clinging to an experience and making a conceptual 'nest' out of it for oneself.

Approximately two hours after the first administration of ayahuasca, the participants could approach the guides for, within reason, additional doses as they wished until approximately 1.5 hours before the end of the ceremony. Tobacco snuff was also offered to those who requested it.

The group setting could produce interpersonal experiences of group cohesion and belonging, which could be essential in healing interpersonal trauma. Such effects would likely have been unachievable in individual therapy. One ceremony held outdoors around an open fire in a trance-like state generated the archetypal impression of being a part of a community thousands of years ago.

In the morning, at the end of the session, there was typically a sharing circle with a duration of one to two hours. Concerning the consumed substances, no adverse events related to the safety or quality of the substances were observed. This observation aligned with the published research indicating no safety issues in indigenous brews [10].

## On the background of the guides

Concerning the background of the guides, some tribes had suffered from rather extreme trauma, both due to external factors related to colonialism and slavery-like conditions imposed by rubber barons as well as intrinsic factors such as difficult environmental conditions, poverty, and a high prevalence of domestic and sexual violence. In some cases, slavery-like conditions persisted up to the 1980s. Some other tribes had encountered less trauma. The tribes with more extreme trauma histories appeared more accustomed to treating more difficult conditions. In some cases, the preservation of psychedelic therapy practices had depended on two to three people who had stayed undercover for decades and transferred their knowledge to apprentices during the last decade of their lives.

Travel costs from remote Amazonian areas are typically very high. In contrast to traveling from some of the large South American cities, from which one can reach Europe in a day, reaching those cities from remote areas may require several days: a day or two on a river by boat, travel by bus or car, and two intra-national or intra-continental flights. Also, travel costs inside Europe quickly accumulate.

Financially, the helpers and apprentices appeared to be unpaid in most cases. Typically, the events appeared to have been non-profit, occasionally at a loss. In one case, due to a low number of attendees, the organizers worked for several weeks without compensation, which endangered the continuity of the operation. Often, attendees were asked for various favors, such as bringing the guides and the team somewhere with the attendees' cars. Between ceremonies, guides and teams were accommodated at local organizers' or helpers' homes.

Typical operations appeared to happen at a subsistence level. Regardless, the visiting guides had usually been promised a certain amount. The income was typically used to fund the villages of the guides, for example, by buying boats for river travel, building community spaces, repairing flood damage, covering emergency medical costs, or buying drinking water filtration systems. All in all, the operations appeared to be best described as development aid.

In exchange, the locals could communicate directly with and learn from guides who had years or decades of practical experience in psychedelic therapy. This verbal and undocumented information remains generally unavailable. However, due to language barriers, cultural differences, and differences in knowledge bases and conceptual frameworks, usually only small fragments of knowledge could be received at a time. Building knowledge bases thus required long-term commitment.

The approach of the guides appeared to be to show, not tell. The general assumption appeared to be that relevant information could only be learned first-hand through personal embodied experience in ceremonies. In the European vocabulary, this method might have been called seeing for oneself; in the Amazonian vocabulary, one might have said that the medicine itself taught one what one needed to know.

The function of the ceremonies could thus be described as development aid being traded for knowledge and healing that were unattainable by local methods. In other words, the operations could be described as an exchange of technologies and wealth. The European societies lacked knowledge of technologies for healing with psychedelics, whereas the Amazonian indigenous people lacked technologies for producing clean water (filtration systems), electricity (solar power), protein (e.g., fish cultivation ponds in villages), communication (mobile phones), and education (books, etc.).

This technological trade had emerged because it appeared beneficial for both parties. Lack of resources, however, hindered this knowledge transfer. With better resources, these opportunities could have been used much more productively. For example, the received information typically remained verbal, i.e., undocumented, most of it only known by the apprentices. Proper documentation would have required significantly more time and personnel resources. Learning was bilateral, though: the indigenous people learned about European behaviors, habits, and practices (anecdotally, for example, how to use a shower).

Observing expert guides in operation appeared invaluable for understanding the possibilities of these forms of therapy. In contrast to the current state of medical research, which still largely deals with trying to prove 'efficacy' within the paradigm of evidence-based medicine with statistical generalizations lacking context, participants could observe firsthand an experienced guide conducting a ceremony for a group of thirty people who had, for decades, suffered from treatment-resistant depression, PTSD, or C-PTSD, including a few attendees with a history of transient psychotic disorders, with many of the issues ending up fully or partially resolved in one weekend.

A difficult environment placed selection pressure on people and technologies. In order to ensure survival, inefficacious methods needed to be swiftly discarded. The Amazonian jungle featured a difficult environment due to natural conditions (heat, humidity, insects, predators, protozoa, etc.), a history of tribal wars, a history of slavery in rubber plantations, a high prevalence of domestic, sexual, and other interpersonal violence in some tribes, and more recently, the consequences of climate change (severe flooding), as well as pollution of rivers caused by illegal mining, the decline of animal populations for hunting, and large-scale loss of forest cover due to agriculture and fires. Some of the involved tribes still partially relied on a hunter-gatherer lifestyle. The little electricity they had was produced by a few gasoline generators or solar panels, and they resided out of reach of modern telecommunications networks.

## Sexual misconduct

Therapeutic and organizational incompetence or malpractice may exist in official healthcare contexts as well as in unofficial contexts, including ayahuasca ceremonies. Linden has provided definitions for various types of unwanted effects of psychotherapy [37]. Unwanted effects include adverse treatment reactions caused by correct practice, malpractice reactions caused by incorrect practice, and treatment non-response, which can be a result of either correct or incorrect practice. Malpractice reactions are the direct fault of the therapist, who can be held accountable. The deterioration of illness may or may not be connected to treatment.

Lindgren and Rozental have described general issues in psychotherapy, including a lack of continuity of care (e.g., frequent cancellations and rescheduling), a lack of progression in the administration and implementation of care, a lack of patient involvement in treatment choice and planning, compromised clinical routines (e.g., errors in patient records and diagnostics), and a lack of transparency regarding limitations of competence [38]. Issues regarding therapists' attitudes and behavior included role confusion with transgressive behavior (e.g., self-centeredness, sexual invitations), negative attitude and communication, lack of empathy, insincere or disrespectful advice, and a lack of collaborative stance.

Overt malpractice such as intentional sexual abuse in the psychedelic context has appeared common in areas of 'ayahuasca tourism' in South America where ceremonies are led by non-indigenous males [39, 40], and to some degree in the United States where MDMA therapy is common [41, 42, 43, 44]. In European contexts, guidelines have been written to diminish the risk of abuse, which in the US has been mostly associated with MDMA due to its pharmacological profile and widespread use [45].

Some of the South American indigenous female guides told about having personally treated significant numbers of female victims of such male abuse in their own countries. The dividing line appeared to be whether the ceremony contexts were indigenous or not. In the observed two indigenous traditions, due to the concept of the sacredness of the medicine and the ceremony context, sexuality was strictly out of bounds.

According to the author's observations, sexual misconduct in the ceremony contexts following traditional lineages was nonexistent. The traditions recommended or demanded sexual abstinence several days before and after ceremonies. All sexual activity during ceremonies was forbidden. Absolute sexual abstinence was also required during plant diets, which were part of the training of guides and apprentices.

In addition, all of these ceremonies were organized fully or partially by women; the visiting guides or apprentices always included women; and most helpers were women. Most of these women had been either personally subjected to some degree of sexual abuse or sexual violence, or had otherwise witnessed it firsthand. In one case where such experience was missing, the female organizer appeared to overemphasize these risks, leading to an underemphasis of other risks concerning the well-being of male participants abused and traumatized by women.

## Perspectives on non-sexual malpractice and adverse events

The risks and observations of non-sexual malpractice must be evaluated, taking into account the context in which the work was performed. First, the participant population consisted almost solely of participants with treatment-resistant conditions that official healthcare systems had given up on or who had been unable to obtain any feasible treatment at all. Many of the participants had suffered from severe medical malpractice in the field of psychiatry or psychotherapy. This population was extremely sensitive to re-traumatization by any kind of treatment, even by many kinds of everyday social interactions. Second, in comparison to the highly compensated psychiatric and psychotherapeutic context, the work was performed with exceptionally low resources, being either volunteer-based or otherwise practically unpaid. Many of the guides resided below poverty levels or at subsistence levels in their own countries. Third, the evaluation must take into account the personal and tribal histories of the guides. Fourth, positive outcomes must also be taken into account.

All events that could be considered malpractice concerned unintentional re-traumatization. One case involved a beginning local female organizer/apprentice with high standards and expectations who had recently introduced a multi-step application process for prospecting ceremony participants. The process involved approximately a hundred pages of written materials, an application form, and an audio or video call interview. Only people with a 'serious intent to work on their issues' were selected. Persons with psychotic disorders and other conditions deemed 'too serious' were excluded. Safety and trauma-informedness were emphasized. Three visiting expert psychedelic guides represented over one hundred years of experience in the therapeutic use of various plant medicines. Six helpers were also present. There were approximately thirty participants, giving a ratio of one team member per three participants. Two of the participants were first-timers, while most others had between one and five years of ceremony experience. The quality of the location was above average.

At the end of two flawless ceremonies, assumedly out of personal stress and frustration, the local organizer announced that unspecified participants had not sufficiently 'respected the medicine'. They had assumedly taken too much of it (to avoid dissociation, the written materials had recommended smaller amounts). They had 'kept coming back to ceremonies for more and more medicine' instead of doing their 'integration work' at home between ceremonies, and would therefore not be invited to future ceremonies. These unexpected and unspecified allegations were experienced as re-traumatizing by some participants. Such incidents are typical in the official healthcare system: almost by definition, treatment-resistant patients have been subjected to numerous similar events. In contrast, the indigenous never commented on anyone's progress or lack thereof.

A visiting male guide attempted to remedy the situation, both immediately at the ceremony and a week later in a personal discussion with one participant. There was also a pre-specified post-event protocol that involved an online video conference 1.5 weeks after the ceremony (approximately half of the attendees were present), as well as an option for on-demand personal appointments with the organizers and/or helpers. Some helpers also spontaneously contacted a few attendees. In addition, some attendees informally discussed the issue among themselves. As a result of this process, the organizers acknowledged the issue, which had mostly affected two participants with previous experience of malpractice in various settings. It should be emphasized that in the official healthcare systems, such re-traumatizing events have appeared to occur daily, yet they are rarely acknowledged as such, even less discussed or resolved.

In this case, the personal stress appeared to have been caused by the scarce availability of the medicine, which in turn was caused by current legislation. In an attempt to maximize the utility of available medicine for attendees, the organizer resorted to increased control, which proved counterproductive with respect to outcomes. The adverse effects were thus a result of a mindset emphasizing productivity and control in the context of outdated legalization concerning psychedelics and psychedelic therapies. Had there been no such legal pressure, the issue might not have emerged.

Regardless, the organizer's inability to contain the stress appeared due to relative inexperience and insufficient stability. Excessive standards led to the phenomenon of 'perfection being the enemy of good', i.e., unintentional self-sabotage. The example illustrated the harmful effects of formalizing informal processes. An attempt to copy official procedures also introduced their counterproductive, bureaucratic, and re-traumatizing elements into the unofficial context. One of the visiting guides later pointed to the counterproductive nature of excessive control.

Another, earlier ceremony by the same organizer also appeared unsatisfactory. It was led by a non-indigenous male guide of mixed background, assisted by a younger indigenous male guide representing lineage L2. In this case, the issue was caused by the instability and cannabis use of the non-indigenous guide. He was not reinstated. Later, in another country and context, he was sanctioned and excluded from the community. In lineage L2, cannabis appeared

to be allowed but not openly used in the other observed ceremonies. In lineage L1, cannabis use was prohibited. The viability of the latter policy seemed to be more appropriate.

In one case, although it caused no issues, a guide appeared to have lost the fine edge of his focus; it was suspected that he had consumed cannabis. The problem appeared to be the sedative, relaxing effect of cannabis, which counteracts the 'visionary' effect of ayahuasca. Cannabis likely distracts a participant from facing the issues they should be facing in a ceremony, making attendance pointless. In one ceremony, a participant facing difficult emotions took a break, secretly consumed cannabis to sedate them, and returned to the ceremony in a counterproductive, dissociated state, unfeasible for processing trauma.

A second case involved a non-indigenous female guide trained by an experienced indigenous guide. She was exceptionally talented, often producing outcomes one could not have believed, had one not witnessed them firsthand. Regardless, she had a long personal history of abandonment and neglect, and despite years of training and years of experience, she had not resolved all of her personal trauma. This led to vulnerability to trauma triggers, fluctuating energy levels, and instability. When tired or exhausted, she could suddenly become angry for little reason, which was problematic for people previously traumatized by angry people in authority positions. Although her intent was to clearly point out the issues that participants needed to work on, her manner was often harsh and judgmental. The issue appeared to be related to an imbalance between the rather excessive demands of the work and getting enough recognition and compensation for it.

Due to her personal characteristics, she often attracted an extraordinarily sick population, to the extent that whereas in others' ceremonies there were a handful of attendees with difficult conditions and twenty or thirty with milder conditions, in her ceremonies the ratio was routinely reversed. Regardless, the ceremonies were generally very successful. Concerning her frustration tolerance, some community members tried to advise her, but she refused to listen. Eventually, one very difficult-to-treat, easily re-traumatized participant was severely re-traumatized by her. The organizers and other guides gradually stopped cooperating with her. She experienced this as an abandonment, which, together with a series of other abandonments, severely re-traumatized her once again. The consequences of the participant's re-traumatization were mostly corrected by an indigenous guide with whom this guide had previously worked. Several years later, another guide trained in the same tradition began co-leading ceremonies with the female guide, assumedly with success again. The ceremony context thus contained mechanisms for self-correction, both for participants and guides.

A third case involved an experienced indigenous female guide with a personal history of extreme early sexual and other trauma. By European standards, her history was practically incomprehensible. Similar to the previous case example, despite years of training and years of experience, a significant amount of trauma related to men remained unresolved, leading to instability that was not expressed as anger but as subdued bitterness and a tendency to retaliate. In part, these tendencies may also have been due to income and wealth inequalities. An experienced female organizer/apprentice, referring to unspecified 'unethical behavior', discontinued cooperation with this guide. A male organizer in another country continued cooperation, however.

Treatment non-response appeared likely in one case in which a woman had attended at least twenty different non-indigenous mixed-influence or neoshamanic ceremonies before attending a ceremony led by the above-mentioned non-indigenous guide. This guide advised the woman to not attend any ceremonies or use any psychedelics for at least a year. She did not follow this advice, and later, the above-mentioned indigenous guide stated that it was not necessary for her to avoid ceremonies. Later, she was subjected to repeated sexual violence in South America in another context unrelated to ayahuasca. This caused a psychotic disorder, which was later treated with antipsychotics.

The only obviously problematic issue was related to tobacco-based snuffs, which guides reportedly needed to enter altered states required for diagnosis and healing. While this posed no issue for the guides and was perhaps also useful for many participants inside a ceremony, it was also offered for use outside of ceremonies. Subsequently, some participants with a tendency toward addiction appeared addicted to the snuffs due to their nicotine content. In contrast to tobacco snuffs, ayahuasca use outside ceremonies was prohibited, and it was unavailable to participants.

With regard to safety in general, one participant accidentally hit his head on a wall during a ceremony. There did not appear to have been long-term consequences. Other notable safety-related incidents were not observed.

With regard to psychoses, in one case, a male participant had been treated for psychosis in a hospital and discharged two weeks before a ceremony. The ceremony was uneventful and the treatment outcome good. In another ceremony, two women with no background or obvious tendency towards psychosis appeared to become slightly transiently psychotic for half an hour. In the other case, in practice, the 'psychosis' exhibited itself as her standing up, walking around, and talking to herself, repeating the words 'I don't understand!', disturbing others. She was taken to another room by the helpers to calm down. Later, she described that the situation was caused by an unfathomable surprise when she realized that the death of her child had not been her fault; in other words, by a release of guilt. In the end, the trauma related to the death was resolved. In the other case, a woman began to shake excessively and was also taken aside to calm down.

A return to mainstream society after a short visit to another world put severe pressure on many of the attendees: going home could feel like 'hitting a brick wall' [46]. This aspect distinguished ceremonies led inside indigenous communities from ceremonies led in the European context. The re-traumatizing effect of residing in an unsatisfactory environment often canceled some of the progress made in a ceremony. This appeared to be the main issue with respect to the permanence of improvements acquired in ceremonies. If participants always returned to the environments that caused their issues in the first place, they were able to resist the effects of the environment for a while but eventually burned out, and the environment forced the original issue onto them again. This aspect has been discussed in more detail in another case study [47]. Therefore, to the extent possible, either the societies would need to be rid of their re-traumatizing aspects (e.g., social isolation) or treatment efficacy somehow needs to be raised to a 'next level', giving full immunity against re-traumatization.

All in all, problems appeared to be primarily related to guides' lack of stability, which was due to unresolved trauma, except in the case of the non-indigenous male guide, for whom the root issue remained undetermined. For their part, the observed indigenous male guides featured unsurpassed mental stability, with women presenting with more variation, regardless of background. Stability appeared to be inversely related to the degree of residual trauma, which appeared to be higher in female guides. Regardless, the two female guides brought a considerable amount of knowledge to Europe with them. They successfully treated participants with a history of psychotic disorders and participants with traumas as severe as their own traumas had been, whereas everyone else had either refused to treat these participants at all or given up on them long ago.

In one observed case concerning a young woman with extremely severe early sexual trauma who had been through every available health care facility without any improvement, the non-indigenous female guide appeared to rebuild her whole identity in a weekend—something that, at least in the short term, appeared akin to a miracle cure. There was no possibility for follow-up in this case.

From a societal cost-benefit point of view, treating the most difficult patients first often appeared to be the optimal strategy. The strategy of the official health care system appeared to be the opposite. All in all, these examples illustrate that successful treatment of extreme conditions may require in-depth experience that may be impossible to obtain by other means than previous personal experience of having resolved the same condition in oneself. Personal experience with a resolved condition allows for detailed knowledge of its etiology, structure, and symptoms. Successful resolution of the condition allows for either explicit or intuitive knowledge on how to resolve the condition.

In the presence of insufficient resources and external support, guides' personal experience of trauma, where insufficiently resolved, may lead to complications. The obvious solution would be to offer them the necessary resources. The low-resource unofficial context did not possess such resources at the time. It should also be noted that simply being surrounded by severely traumatized people all the time is extremely taxing, something that most people could likely not tolerate at all.

## Conceptual framework differences as a source of confusion

Conceptual differences between the indigenous traditions and European biomedicine were colossal. Indigenous concepts often appeared as foreign to the participants as the concepts of, say, 'evidence-based medicine', appeared to the indigenous. Neither framework appeared superior; both had their strengths and weaknesses. In practice, the largely undocumented, apprentice-taught, often intuition-based indigenous conceptual frameworks produced observations and action plans that appeared more to the point, producing better treatment outcomes. An optimal framework would likely result from a fusion of various frameworks.

Rodd elaborated on the practice of the acquisition of knowledge from the 'integrative mode of consciousness', i.e., from altered states induced by ayahuasca and other plant-based medicines [48]. The training of a guide involved conditioning the mind to achieve optimal perceptual capacities that facilitated accurate prediction and successful psycho-social prescription. Technologies of consciousness were described in terms of gods and spirits, but also in terms of studying and the acquisition of information. These methods could be explained in neurobiological terms. Diagnosis was primarily based on schemas or templates of human behavior based on years of social analysis performed with heightened information processing capacities induced by ayahuasca. Observations of the ceremonies aligned with the principles described by Rodd.

The concept of spirits appeared to be the most central. Often, 'spirits' referred to the pharmacological properties of plants. A 'spirit' of a tree being of certain quality meant that the tree contained a certain pharmaceutical component. Various components had been found suitable for resolving certain medical conditions. The pharmacopoeias of some tribes contained hundreds of plants for various uses, including birth control or the treatment of infertility, infections, and poisonings. Spirit could also refer to pathogens. For example, water in a pond could be governed by 'bad spirits', i.e., contaminated by some pathogen.

Pharmaceutical interactions could be referred to as 'jealousy between spirits'. These interactions occurred not only between two external substances but also between the external and the internal. The most common interactions to avoid included: 1) ayahuasca and sex hormones; 2) ayahuasca and sweet-tasting carbohydrates; and 3) interactions

of monoamine oxidase inhibitors (MAOIs) with certain pharmaceuticals and foods. It was considered that these interactions either caused adverse effects such as nausea or prevented subtle effects of ayahuasca, preventing the participant from accessing certain states, thus limiting or eliminating the treatment effect.

Therefore, one important difference between Amazonian people and European participants was the state of their bodies. The Europeans were largely saturated by decades of sugar and salt consumption and subsequently required stronger brews and higher doses to experience an effect. Still, their experiences likely differed from those with different body constitutions. The indigenous lineages required the consumption of bitter herbs for long periods of time in order to modify the body.

The concept of 'spirit' could also refer to historical social interactions. A condition (trauma) could be said to have been caused by a specific spirit (historical event caused by an external party). This spirit could be evicted, i.e., the condition resolved, with a specific song when the participant was in a specific altered state. This could be understood as the combination of ayahuasca and a song producing a certain mental state that would allow for the processing of the related traumatic event.

A more psychedelic-specific feature was that one could occasionally see visual representations of illnesses being extracted from the body. Obsessing about the ontological quality of these experiences appeared counterproductive; it was often best to simply accept favorable outcomes and ignore incomprehensible details.

A major conceptual difference concerned the etiology of psychiatric disorders. While European traditions conceptualized disorders as internal properties of individuals, indigenous tribes typically maintained the opposite view, conceptualizing everything as a result of external influences. Diagnostic systems such as ICD-10 describe collections of symptoms and explicitly ignore etiology. Conversely, the indigenous perspective paid little attention to specific symptoms and emphasized interpersonal causes.

The concept of spirit did not appear to refer to something immaterial. The common understanding of 'spirituality' as immaterial thus appeared unfitting to these contexts. Rather, 'spirit' appeared to be used as a general, somewhat vague reference to various common concepts.

Another central concept was sacredness. 'Spiritual' often actually referred to 'sacred', and anything related to sacredness was to be taken seriously. The dismissal of the concept and the implied disrespect of the medicine were considered serious insults. For most, the personally experienced life-changing effects of ayahuasca had been substantial. Especially the guides had made great personal sacrifices, endured years of suffering, and taken extraordinary risks to devote their lives to the service of the plants and people. In this sense, the context was not only highly religious but also highly serious, i.e., strict.

The sacredness of nature was also the motivation for the healing work. A guide described that they followed a prophecy from pre-colonial times. The prophecy was said to have predicted climate change and the subsequent collapse of societies. The solution was to build alliances with the non-indigenous in order to heal them from their diseased state with the rainforest medicines and subsequently make them realize the value of the rainforest and nature in general. In this sense, the work of the indigenous was missionary, intended to save their sacred forest by awakening non-indigenous people from their undiagnosed, subconscious, historical trauma-related, society-wide state of dissociation.

It has been said that while in churches one can read, talk, and hear about divinity, with psychedelics, one can experience it firsthand. While experiences of divinity may also occur in 'recreational' use of psychedelics, the indigenous traditions represented a completely different level of respect for the divine aspects. Therefore, the concept of 'respecting the medicine' was considered essential, and real or assumed transgressions against this concept could cause severe conflicts.

## Discussion

The described unofficial ceremony contexts appeared irreplaceable for the treatment of patients that had proven impossible to treat in official healthcare contexts. The contexts also functioned as unique sources of expertise on psychedelic therapy. While privacy regulations prevent patients from getting to know and communicating with each other in official contexts, the unofficial contexts were communal, allowing for the exchange of positive as well as negative experiences and the exchange of best practices. Not even guides appeared to hold 'tenured' positions or excessive influence; as invited visitors they were largely replaceable. There was a relatively low threshold for presenting criticism as well as praise. Best practices spread within and between groups. Whereas official contexts appeared formal, inflexible, and extremely slow to change, informal contexts appeared flexible and better in adopting innovations.

Despite these contexts being relatively non-academic and primarily adhering to indigenous traditions, some recent developments in psychotherapy were also followed (e.g., [49, 50, 51, 52, 53]; as a detail, international expertise on therapy for sex trafficking-related sexual abuse was also noted and taken into account [54, 55]).

Likely because of the described kind of pre-screening process, there was little to no history of or tendency for 'recreational' use of psychedelics among participants. In traumatized people, ayahuasca primarily caused one's traumatic experiences to surface, which was typically felt as the opposite of 'recreation'. In general, ayahuasca may be considered unsuitable for any recreational or poorly structured use.

Participants had clear goals for their participation. As complex trauma was gradually processed and resolved in consequent ceremonies, these participants tended to leave the ceremony context and, say, start a family or acquire a suitable vocation. Treatment of C-PTSD is slow, and it is likely that in many cases, ongoing treatment is necessary and all issues might never be resolved. Regardless, significant improvements can be obtained. Recently, two Swiss psychotherapists pointed to this phenomenon concerning their experiences treating C-PTSD patients with MDMA and LSD group therapy in Switzerland [56]. The indigenous guides, likely having followed hundreds of such cases for years, appeared to take this into account. In contrast, some non-indigenous organizers featured a more short-term goal-oriented mindset and impatience, wanting to focus on conditions that could be resolved in a single ceremony (e.g., PTSD) or in a few ceremonies. While understandable, someone should also treat people with C-PTSD.

Issues of scaling apply both to the medical psychedelic therapy training as well as to the indigenous training, although training for group settings is slightly more scalable, perhaps twenty-fold more scalable, than training for individual therapy. Despite that, due to a large discrepancy between demand and supply of affordable therapies, self-treatment methods also need to be considered. Their principles have been preliminarily described in an article and a preprint by the author [57, 47]. Self-treatment appears to be the only solution to the issues of scalability and cost. Properly organized, it is also sufficiently safe. The safety of self-treatment with psychedelics needs to be compared to the safety of doing nothing or preserving the status quo, and the conclusion is simple: doing nothing is almost always less safe. Self-treatment should be combined with group therapies and, where possible and necessary, with individual therapies.

With regard to aspects mentioned by Lindgren and Rozental [38], including continuity of care, administration and implementation, patient involvement, diagnostics, transparency regarding limitations of competence, attitude, empathy, and collaborative stance, according to the author's observations, the situation appeared relatively good.

These unofficial contexts could have been completely destroyed by a single phone call, as happened, for example, in the case of psychiatrist and psychotherapist Friederike Meckel Fischer in Switzerland, when a jealous ex-partner of a participant informed the police about Meckel Fischer's underground therapy work [15, 16]. The incentives for competence and ethics appeared significantly higher in underground contexts than in official psychiatric contexts.

The fact that this never happened in the contexts representing the two traditional lineages was not due to fears, cult-like behaviors, or similar reasons, but simply to the fact that their work was experienced as uniquely beneficial, either for the participants themselves or at least for the other participants. It provided them with efficacious treatment that had been unavailable anywhere else. Compared to conventional psychiatry and psychotherapy, the treatment efficacy and cost efficacy in the observed ceremonies seemed ten- to hundred-fold higher. Official contexts appeared to be decades behind the lead. However, these indigenous contexts were highly selected and possibly unrepresentative of the field as a whole.

On the other hand, where integrity and competence were obviously lacking, sanctions followed, as in the case of the non-indigenous male guide of mixed background. It was notable that this guide was the only one who lacked training in traditional lineages. In the case of the non-indigenous female guide, harms were evaluated against realized and expected benefits, and the latter were considered more important. Personal trauma was assumed to be resolvable, and she was given the time to resolve it.

It appeared that integrity in itself was a protective factor. Social groups may intuitively protect things of value, such as people with integrity and competence, so that useful structures are cultivated, regardless of the current legal environment. Like resistance movements, they may offer a way forward from societal dead ends; they are paradigm shifts in the works. Typically, after a decade or two, their methods may be considered obvious, and no one will remember why they were resisted in the first place. A Finnish example of this was the history of the buprenorphine substitution treatment for opioid addicts, which, for two decades, was considered completely inappropriate even as an idea, then reluctantly accepted, and is currently obligatory, with practically no other treatment options available [58, 59, 60].

Concerning outcomes in the five-year period, many participants were observed for long periods. The progress was often slow and gradual; there were setbacks, and typically about half of the issues got resolved. Considering the starting point of many, and the difficulty of resolving decades of trauma typical for complex trauma, outcomes seemed very positive on average. The worst cases could still not, say, study or work, but they were no longer in a constant state of shock and dissociation. The most favorable cases appeared to be fully healed. Left untreated, most would likely have either stayed unchanged, deteriorated, or died. It should be noted that, similar to the knowledge of treatment methods spreading in waves from a center point, untreated trauma also spreads in exactly the same way.

As mentioned above, the determining factor with regard to the permanence of acquired improvements was whether the participants resided in a constantly retraumatizing environment and always had to return to the same disadvantageous

conditions that had caused their issues in the first place (poverty, social isolation, etc.). It was thus difficult to utilize temporary interventions to permanently heal individuals whose daily environment was unsupportive of their health; it would have required even greater individual impacts.

The idea of combining different paradigms or methodologies to drive innovation and productivity is a known concept in various fields, including science, technology, and business. Many scientific breakthroughs have occurred at the intersection of different disciplines. In the context of the current study, it appeared that the interaction between different paradigms (i.e., the indigenous 'spiritual' and the European 'scientific') was a key aspect of productivity. The interaction appeared to produce more progress than work inside each paradigm separately could have produced.

The timing and dosing of psychedelics were necessarily person- and situation-dependent. Treatment processes cannot and should not be standardized in the contemporary biomedical sense. Psychedelic therapy may best be understood as a form of intuition and personal experience-based art. A mechanistic application of some simplified, standardized ruleset is unlikely to be successful; instead, outcomes will likely be negative. In the end, healing is about love. When it is missing, it will be obvious, and no healing will occur.

## Comparisons with public healthcare systems

Taking into account that the participants appeared almost exclusively to be people who: 1) had been unable to acquire any psychiatric healthcare due to bureaucratic complexity or financial or other reasons, or who had been denied treatment because of various administrative rules or contraindications; 2) had acquired ineffective care or were considered 'treatment-resistant'; or 3) had been traumatized by public and/or private health care systems, some comparisons between the observed contexts and conventional healthcare systems may be helpful.

The author's experience almost exclusively concerns the Finnish healthcare system, of which the author's experience has been very negative. Concerning public discussion, it was recently claimed that the official psychiatric health care system has already collapsed [61]. A widespread discontent with the system exists. For example, parents of young patients have complained about the impossibility of accessing psychiatric care [62], and about its inefficiency, calling it a 'storage system' without any treatment effect [63]. Treatment guidelines reflect psychiatrists' interests only, with other professions and viewpoints excluded from guideline committees [64]. The diagnostic system remains arbitrary.

Psychiatrists avoid committing to full-time roles within the system and assuming complete responsibility for it; instead, they opt for short-term and part-time engagements with double or higher pay, as the employer has no choice but to try to find anyone [65]. Those who still work in the system spend up to 70% of their time writing medical certificates due to impractical laws and regulations [66]. In public healthcare as a whole, almost 40% of personnel feel dissatisfied [67]. Its cost crisis has appeared unsolvable [68]. Constantly lowering standards is not a sustainable solution, and at some point, healthcare organizations, having become empty shells devoid of life, cease to count as healthcare of any kind.

The problem with discussing these issues is the public's prevailing lack of experience with better or even any alternatives, which leads to a lack of vision and attempts at fine-tuning the existing structures. Attempts at explaining that alternatives exist hit a wall because psychedelic therapy is apparently incomprehensible without personal experience, and acquiring that is prevented by current legislation. Even where personal experience exists, it is typically either very shallow or exhibits paranoid tendencies. The eventual outcome of attempts at improving the system is thus a dead end.

With regard to aspects mentioned by Lindgren and Rozental [38], the observed contexts appeared to be significantly better than conventional psychiatric healthcare in Finland. In theory, there are laws to protect patients' rights, and there are instances for making complaints. In practice, these laws are of no consequence, and if patients have the skill and energy to complain, these complaints lead to nothing (see, e.g., [69]). Little may have changed since Foucault [70, 71]: the mental health care system is often no different from a totalitarian system of institutionalized, typically unconscious violence. From the point of view of patients, psychiatry may resemble a casino: the house always wins. Naturally, these qualities do not contribute to healing but to exacerbating and propagating the original traumas, creating the need for more treatment and subsequently creating a feedback loop that inflates the psychiatric system, transforming it into a self-perpetuating drain of resources.

Lysaker et al. noted that recovery from mental illness involved recapturing a sense of agency [72]. In public health, social services, and unemployment benefit systems, patients typically have no influence on the selection of personnel, facilities, or methods. They may be implicitly or explicitly sanctioned for declining treatment or for 'disobedience'. The ceremony contexts appeared better in allowing for autonomy and agency to develop.

Due to the style of training in the traditional lineages being overly demanding for most, medical personnel cannot be easily re-trained into exactly the same practices. The required apprentice-style of learning, the years-long duration of training, the demanding nature of plant diets carried out in social isolation, the central role of musical skills, as well as the lack of written documentation of the methods, make direct adoption difficult. Adaptations more easily suited for integration with European healthcare contexts include 5-MeO-DMT [73, 74, 75], MDMA, psilocybin, and LSD-based treatments. Several examples of tested, readily implementable European adaptations exist [46, 76, 56, 15].

The evidence-based medicine (EBM) methodology [77] has proven an ill fit for healthcare innovation in general and psychedelic research especially, due to, for example, the practical impossibility of blinding and its extreme slowness, with decades having been wasted to reinvent therapeutic methods that were widely and successfully used in the 1960s. There has appeared to be *no evidence* for the feasibility of the 'evidence-based' methodology in this context. The EBM paradigm has turned counterproductive. In the observed ceremony contexts, inquiries about or discussions of evidence from clinical trials were absent. Concerning decisions about competence and efficacy, the attendees appeared to rely on direct observation and on their own judgment.

The current societal mindset, with an implied necessity of depending on 'experts' on every issue, appears to have become severely counterproductive. Illich has noted that 'medicine does for health what education does for learning: it converts a good that people might autonomously cultivate into a scarce commodity only accessible through an institution that monopolizes its distribution' [78]. The commercialized, medicalized, regulated-to-be 'psychedelic renaissance' may be about to do exactly that: convert something that should be autonomously cultivated into an inaccessible, bureaucratic monopoly. Unless revised, this approach may be the last straw in the possible upcoming fall of 'European values' and societies.

From the point of view of competitive advantage between Europe, Asia, and the US, the adoption of more efficacious mental health care practices would significantly benefit Europe by reducing public finance deficits and improving population health. From an intra-European point of view, efficient, affordable methods for resolving trauma resulting from the war in Ukraine are urgently needed [79]. The observed methods appeared especially suitable for resolving sexual trauma caused by rape or childhood sexual abuse. More broadly, methods for changing the ways societies are led are urgently needed internationally.

While the uncertainties related to unfamiliar methods are overestimated, the risks of continuing with the current practices are severely underestimated. Societies are getting increasingly chaotic and wars are increasing, but the responses to these are increasingly primitive: militarism and the threat of violence, instead of undertaking even elementary attempts to observe the actual causal pathways behind the developments as well as adopting a therapeutic approach.

## Conclusions

The observed ayahuasca ceremony contexts appeared to have emerged to help patients that official healthcare systems had proven unable to treat or excluded for various reasons. The ceremony contexts thus complemented the official healthcare system. Due to the legal situation, incentives for competence and ethical conduct appeared equivalent or stronger than those of official healthcare systems. In the observed subset, the ceremonies appeared relatively well organized by competent and ethical actors. Malpractice appeared rarer than in official psychiatric care, whereas treatment outcomes appeared significantly more favorable. Due to a high degree of communality and the strong presence of expertise from traditional, indigenous lineages of psychedelic therapy, these contexts appeared to contain mechanisms for self-correcting possible emerging issues. The ayahuasca ceremony contexts functioned as nexuses of treatment method innovation and development.

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**Abbreviations:** *5-MeO-DMT: 5-methoxy-N,N-dimethyltryptamine; C-PTSD: complex post-traumatic stress disorder; DMT: N,N-dimethyltryptamine; EBM: evidence-based medicine; LSD: lysergic acid diethylamide; MAOI: monoamine oxidase inhibitor; MDMA: 3,4-methylenedioxyamphetamine; PTSD: post-traumatic stress disorder; SSRI: selective serotonin reuptake inhibitor.*

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