

## **Decolonial approach to the mind in the study of psychedelics**

*Abordagem decolonial da mente no estudo dos psicodélicos*

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### **ABSTRACT**

Studies of the mind have remained inert in a representational cognitivism which conceives the cognitive system as a computer. Moreover, when it is commonly presented in literature that psychedelic revolutions began in the counterculture in the 1960s, the science and resistance of the original peoples are forgotten, the “zero” revolution is forgotten. Decolonial studies are relevant in psychedelic research because they address the oppressive and damaging pasts of powerful institutions, including the medical sphere. This article aims to describe the relationships between psychedelics, knowledge, consciousness, and cognition from a decolonial perspective. We revisit the Presentational Theory of Mind (PTM), based on ecopsychology which considers that cognition is temporal, incorporated and situated, composed of mental crystallizations that are well defined (representational) in orthogonality to poorly defined crystallizations (presentations), in an interactive continuum representational-presentational. We argue that an epistemological perspective that considers Indigenous philosophies in the current scientific construction of psychedelic knowledge is necessary. A decolonial approach recognizes Indigenous perspectives as equally valuable, which is essential for the success of the current psychedelic renaissance. It helps to reassess problematic distinctions that shape thinking, material realities, and experiences in psychedelic research.

**KEYWORDS:** philosophy of mind, epistemology, ecopsychology, presentational, entheogens.

## RESUMO

Os estudos da mente têm se mantido inertes em um cognitivismo representacional que concebe o sistema cognitivo como um computador. Além disso, quando se apresenta comumente na literatura que as revoluções psicodélicas se iniciaram na contracultura na década de 1960, esquece-se a ciência e resistência dos povos originários, esquece-se a revolução “zero”. Estudos decoloniais são relevantes na pesquisa psicodélica porque abordam os passados opressivos e prejudiciais de instituições poderosas, incluindo a esfera médica. O objetivo deste artigo é descrever as relações entre psicodélicos, conhecimento, consciência e cognição de uma perspectiva decolonial. Retomamos a Teoria Apresentacional da Mente (TAM), baseada na ecopsicologia que considera que a cognição é temporal, incorporada e situada, composta de cristalizações mentais que se mostram bem definidas (representacionais) em ortogonalidade a cristalizações pouco definidas (apresentações), num continuum interativo representacional-apresentacional. Argumentamos que é necessária uma perspectiva epistemológica que considere as filosofias indígenas na construção científica atual do conhecimento psicodélico. Uma abordagem decolonial reconhece as perspectivas indígenas como igualmente valiosas, o que é essencial para o sucesso da atual renascença psicodélica. Ela ajuda a reavaliar distinções problemáticas que moldam o pensamento, realidades materiais e experiências na pesquisa psicodélica.

PALAVRAS-CHAVE: filosofia da mente, epistemologia, ecopsicologia, apresentacional, enteógenos.

## 1. Introduction

The invasion of the Americas by the colonizing powers was not only territorial, but also epistemological, ontological, and cognitive. Cultural colonization is prevalent in many universities, academic institutions, and research centers (Romero, 2022). At the same time, hegemonic philosophy and science have historically ignored much of Indigenous and minority knowledge based on an elitist white bias (Hauskeller e Schwarz, 2023). Mainstream psychedelic science has followed this bias, therapeutizing the magical substances of various communities in order to isolate the therapeutic aspect of their ritual character, reducing it to brain mechanisms (Labate *et al.*, 2022). The attempt to separate the mystical, socio-contextual, and personal elements within the psychedelic experience avoids problems for pharmaceutical capitalism while selling the promise of the “magic bullet” (Devenot *et al.*, 2022) flavored of therapy in an elitist biomedical model that limits society, culture, and psyche. The continuity between the practices developed by Indigenous peoples and the subcultures and therapeutic practices that subsequently emerged in the Global North is equally peripheral in contemporary psychedelic research, and often romanticized when discussed in the broader psychedelic movement (Spiers *et al.*, 2024).

In this context, decolonial studies center the question of how knowledge is produced and argue that knowledge production is an epistemological, political, and methodological issue imbued with power (Adams e Estrada-Villalta, 2017; Maldonado-Torres, 2017; Fisher, 2019; Falcon, 2021b; Figueiredo e Martinez, 2021; Romero, 2022; Hauskeller *et al.*, 2023). Moreover, as a complex and multifaceted phenomenon, cognition cannot

be fully captured by flowcharts or mechanisms (Shanon, 2002). Just as understanding a person goes beyond knowing the neurophysiological activity of their brain, understanding the human mind requires an appreciation of lived experiences, the accomplishments and challenges, and the dynamics of their development. The history of cognition is a dynamic tapestry rich in detail, nuance, and relief (Shanon, 2013).

Ecological decolonial epistemic models propose a deatomizing union between subject and object limited by binarisms (Fisher, 2019). A little-known approach to cognition is Benny Shanon's (2013) Presentational Theory of Mind (PTM), in which, instead of creating internal representations of the world, the cognitive system constantly presents itself with a continuous flow of experiences and perceptions. Following this line of reasoning, we justify this work by the need for a cognitive turn, while we are also experiencing a decolonial, epistemic, ontological, and ecological turn. (Maldonado-Torres, 2017; Fisher, 2019). The moral of the argument is that the mind must be understood, not just modeled, following a holistic understanding as opposed to reductionist modeling (Shanon, 2013).

When it is commonly presented in the literature that psychedelic revolutions began in the counterculture in the 1960s, the science and resistance of the native peoples is forgotten (George *et al.*, 2019), the “zero” revolution are forgotten (Savoldi *et al.*, 2023). Actually, by ignoring that the use of psychedelics never died, the so-called “psychedelic renaissance” in the sciences reproduces the imperialism that fueled its eponym, the European Renaissance (Williams *et al.*, 2022). Eurocentric thinking has offered inadequate responses to contemporary issues, while marginalized cultures retain a significant capacity for cultural invention and a more intimate relationship with nature (Cappo, 2018). Although Hofmann and others certainly deserve credit for their contributions to psychedelic science, this narrative fails to account for the stories, traditions, and ritual practices of Indigenous peoples whose contributions and knowledge often go unnoticed and unrewarded in Western medicine (George *et al.*, 2019). Thus, recent calls to decolonize theoretical and methodological frameworks open space for a more meaningful and harmonious engagement with Indigenous worldviews (Hauskeller *et al.*, 2023).

Furthermore, for those who experience them, mystical states appear to be states of knowledge and understanding of the depths of truth not explored by the discursive intellect (Romero, 2022). In an essential sense, cognitive scientists avoid meaning; they study how meaning is represented and processed, but not the matrix of meaning itself (Shanon, 2013). Indeed, the transformative experiences facilitated by sacred psychedelic use bring forth self-reports with great personal and spiritual significance (Shanon, 2002).

Ayahuasca, for example, is a complex and relational space that transcends usual boundaries and divisions between “human” and “nature,” and “us” and “them.” (Albuquerque, 2009). Ayahuasca (from Quechua, aya - dead, soul, spirit, and huasca - vine, liana), a sacramental beverage originating from the Amazon, is more than just two biochemical elements (dimethyltryptamine - DMT and monoamine oxidase inhibitors - MAOIs). Shanon (2002) considers ayahuasca more like a work of art that allows for various personal, cultural, aesthetic, and philosophical insights. Building upon these themes, the question we delve into in this article revolves around the following: What

relationships can we establish between psychedelics, the philosophy of cognition, and Indigenous epistemologies from a decolonial perspective?

This article aims to discuss the importance of decolonizing psychedelic science in relation to the explanatory model that assimilates psychedelics within capitalist health. Specifically, the first section reviews aspects of the epistemology of sacred psychedelic use, focusing on episteme and consciousness. The second section describes the Presentational Theory of Mind (PTM), which opposes computational-representational models of the mind. We propose that it is important to rethink cognitive epistemology based on internal representations and discuss the alternative developed by Shanon (2013). Finally, the third section discusses the decolonization of psychedelic knowledge as an alternative route for new scientific approaches.

## 2. Psychedelics, knowledge and consciousness

### *Psychedelic*

The healing properties of plant medicines and their derivatives were originally brought to Western consciousness by Indigenous cultures worldwide (Williams e Labate, 2020). Currently, the growing interest in the role of psychedelics in health and medicine has accelerated clinical, political, financial, and cultural investments in the potential healing effects of ayahuasca, salvia divinorum, and magic mushrooms (Hauskeller et al., 2023). Among the list of therapeutic potentials of classic psychedelics, depression (Ko *et al.*, 2023), anxiety, post-traumatic stress disorder (PTSD) (Henner *et al.*, 2022), drug and alcohol-related disorders (Van Der Meer *et al.*, 2023), grief (Gonzalez *et al.*, 2020) and eating disorders (Gukasyan *et al.*, 2022) are just a few items on the list.

The word psychedelic comes from the Greek *psykhè* which means mind, soul, and *deloun* which means manifestation, being considered psychedelic elements that manifest the mind. Among these are ecstasy techniques, substances, sensory deprivation, and meditation, among others (Freitas, 2023b). In the case of substances of ritualistic use, it has been preferred to use the term entheogen (*en* – internal, *theos* – divinity, *genos* – origin), which generates the divine interior (Roberts, 2013). Without delving into the debate about which elements are one or other, as it is not the scope of this discussion, we will use the two terms interchangeably, focusing on the substances used sacramentally. Having a relatively brief duration of acute effects from a physiological standpoint (Carhart-Harris *et al.*, 2011; Riba *et al.*, 2012; Rucker *et al.*, 2022; Falchi-Carvalho *et al.*, 2024), classic psychedelics favor long-lasting behavioral and cognitive consequences (Griffiths *et al.*, 2018; Bouso *et al.*, 2022; Daws *et al.*, 2022; Irizarry *et al.*, 2022). In this sense, psychedelics are technologies for exploring the elements of epistemology as a whole (Freitas, 2023b). The phenomenological processes followed by profound changes in the way of thinking and acting, as well as in feelings and emotions are considered expansive states of the field of consciousness (Cappo, 2018).

Entheogens or psychedelics are known to induce mystical states (Mcculloch *et al.*, 2022; Savoldi *et al.*, 2023). Mystical states are seen as forms of deep knowing, where self-transcendence is a lived experience, not just

conceived (Letheby & Mattu, 2022). Even under a materialistic view, psychedelics are considered capable of providing meaningful insights regardless of the existence of a transcendent mystical reality (Garb & Earleywine, 2022). A parallel can be drawn with research on religious experiences, where reports of hearing God's voice do not invalidate the possibility of valid and justified beliefs, nor render research on the phenomenon unscientific (Breeksema & Van Elk, 2021).

As the growing interest in psychedelic therapies attracts private investments, concerns arise that advancements may be marginalizing Indigenous practitioners and ethnic minorities (Devenot *et al.*, 2022; Labate *et al.*, 2022; Romero, 2022; Hauskeller *et al.*, 2023). In addition, research on psychedelics faces, in this regard, ethical and epistemological challenges, especially in relation to the term "mystical", which may conflict with the scientific method (Hashimoto, 2024). The noetic<sup>1</sup> quality is described as an ineliminable structural characteristic of the experience, meaning that the truth perceived during the mystical experience is considered "more real than real" and imposed from the top down (Cole-Turner, 2021; Fischman, 2022). A crucial question is whether mystical experiences are really the nexus of psychedelic therapy (Ko *et al.*, 2022). Pharmaceutical companies hope that the answer to this question will be negative to avoid complications associated with a therapy that involves intense mystical experiences. Such an intense experience is "too big for the fine print about side effects" (Cole-Turner, 2021). The scientific study of mystical experiences is a well-documented phenomenon and the object of scientific study (Breeksema & Van Elk, 2021).

However, the reductionist interpretation of psychedelics as mere modifiers of individual perception perpetuates a colonial approach and ignores the complexity of mystical experiences in native cultures, including their role in the decolonization of thought (Falcon, 2021a; Devenot *et al.*, 2022). Mental health and psychedelic research often reflect an individual-centered view typical of white, wealthy, industrialized Western societies, which limits understanding of uses and their functions in diverse cultural contexts (Hauskeller *et al.*, 2023). Colonialism includes how psyche-society, psyche-nature, and nature-society dualisms act to individualize suffering that has social origins (Fisher, 2019). In the absence of broader structural changes addressing the root causes of suffering, there will be an inherent limit to the extent to which insights induced by (therapeutized) psychedelics can provide relief to individuals and society (Devenot, 2023).

### ***Knowledge***

Knowledge is, in fact, the main element used in all interactions between human beings and the rest of the world with which they interact (Roazzi, 1999). The Indo-European root *gno* is the origin of several words

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<sup>1</sup> In epistemology, "noetic" is an adjective that refers to the processes involved in the acquisition and justification of knowledge. It is also associated with the Platonic tradition, which emphasizes the importance of contemplation and intuition in understanding true knowledge. In mystical experience, the noetic quality refers to the sensation of illumination, significant revelation, such as a profound insight or an encounter with a supreme reality during such experiences (Cole-Turner, 2021).

related to knowledge and perception in different languages. In Old English, it gave rise to "*kenon*" and "*knowledge*", and in Germanic to "*cunning*" and "*can*". From the Latin "*gnoscere*" (to know), we have "*cognition*", "*ignorant*" and "*recognize*". Many synonyms of "*knowledge*" are linked to sensory perception, such as "*vien*" and "*vision*," derived from the Latin "*videre*," and "*idea*" and "*history*," from the Greek "*eidōs*." In addition, "*guidance*" and "*wisdom*" have roots in ancient forms of English and Germanic. The word "*see*" in English also means to understand, and is related to "*insight*" (Catania, 1999). Cognitive psychology studies the psychological foundations of human cognition, that is, how people attain an organized knowledge of the world into categories, along with how this categorized knowledge is used to guide and plan actions in the environment (Spinillo & Roazzi, 1989).

Closely related to cognition, epistemology is the branch of philosophy investigating human knowledge's nature, origin, and limits, questioning how we acquire and validate knowledge. Etymologically, epistemology is the discourse (logos) about science (episteme), which critically analyzes the principles and scientific results from multiple perspectives. Recognizing the provisional nature of scientific knowledge, influenced by various contexts, epistemology also reflects on the organization and development of knowledge, serving as a model for other philosophical areas such as ethics and ontology<sup>2</sup> (Kelly, 2021).

This principled division between cognition and epistemology allows cognitive psychology to focus on understanding how the mind works in a practical and empirically testable manner, while epistemology addresses more abstract questions about the nature and limits of human knowledge (Shanon, 2013). Understanding what psychedelia would be from a decolonial analysis of how we know the world undoubtedly requires what Freitas (2023b) terms a multilateral approach to terminologies.

Let us consider the Indigenous perspectivist epistemological conception that challenges Western notions of objectivity and uniformity of experience in the world. Ethnographic literature on ayahuasca, for example, highlights that the worldview of Indigenous peoples (such as the Kaxinawá, Ashanika, Yaminawa, Airo-Pai, and Machiguenga) and rubber tappers from the Juruá River Valley in the Amazon presents an ontology that discredits conventional dichotomies of Western thought. Commonly found among many of these Indigenous peoples, this perspectivism asserts that all beings, including animals and plants, possess spiritual essences and are social, with human-like attributes and characteristics limited to their natural forms. Reality, therefore, is constituted from a myriad of these interconnected and equally valid perspectives. (Albuquerque, 2009).

According to Albuquerque (2009), in Indigenous epistemology, the knowledge of ayahuasca constitutes a body of knowledge that intertwines and encompasses the understanding of nature and cultural practices in the use of resources. Didactically, the author classified into ten the types of knowledge that one can learn from ayahuasca: medicinal, spiritual, practical, divinatory, social, moral, cognitive, artistic, philosophical, and political. In

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<sup>2</sup> Ontology is a branch of metaphysics that deals with broad and abstract questions about existence, the nature of being, and reality. It aims to understand the fundamental categories of being (from the Greek "*ontos*") and the relationships between them (Kelly, 2021).

ayahuasca cultures, plants are not seen as something, but rather as "someone"; in other words, it's not a tea that allows one to see spirits, but rather "millions of spirits in liquid form for you to drink" (Cappo, 2018). Ayahuasca, used in shamanic practices, is a tool that enables the transition between different realities and bodies, revealing the true essence of things and blurring the boundaries between human/animal and nature/culture (Albuquerque, 2009). It is not only a "representation" of ayahuasca (or molecular) knowledge, but it is dynamically made of the totality that surrounds that context of use (Cappo, 2018).

Still, regarding the knowledge derived from ayahuasca, through a phenomenological-cognitive study with a broad number and variety of ayahuasca drinkers from different cultures, Shanon (2010) investigated the types of knowledge mediated by ayahuasca visions. The visualizations are diverse, colorful, beautiful, and vivid, with a notable noetic sensation found in all analyzed traditions and contexts of use. From simple elements to complex scenes, with immersion in interactive virtual realities conceived from external sources or realities, the visualizations are described as revealing various types of knowledge. Shanon (2010) categorized into nine the types of knowledge mediated by ayahuasca according to the studied cultures: a) factual knowledge, through reports of obtaining information and hidden facts that may or may not be verifiable; b) psychological knowledge, through personal insights, self-understanding, interpersonal empathy, comparable to intense psychotherapy sessions; c) knowledge related to nature and life, through the perception of transformation into plants, animals, and other elements of nature; d) philosophy and metaphysics, through philosophical reflections such as animism, Platonic realism, and interconnectedness among all things; e) general behavior, well-being, and wisdom, in the display of increased physical resilience, enhancement of bodily coordination, and harmony of social behavior (observable and measurable effects especially in ritual contexts); f) specialized healing knowledge, described in reports of physical, emotional, and spiritual healing; g) artistic performance and creativity, observed in increased connection with art, improvised creativity, and quality of performances; h) consciousness with a broader understanding of the diversity of mental states (which can update psychological theories); and i) knowledge about the art of drinking ayahuasca, which involves a long-term mastery process and development of skills that enrich the experience and promote aesthetic appreciation. Although much of this knowledge is not empirically verifiable, they are valuable in promoting well-being, creativity, and understanding of human consciousness. Even in the case of learning ayahuasca, Shanon (2002) recalls when Taussig (1986) discusses in conversation with a shaman that ayahuasca can be a great liar and may even take time to show the drinker the things as they are.

Concerning how knowledge is conveyed in visions, Shanon (2010) categorized it five: a) the *general impact* of aesthetics and beauty causes emotional impact and admiration leading to new meanings about life; b) *teaching by showing* images or scenes that convey lessons, such as autobiographical and non-autobiographical scenes with diverse outcomes, presented in snapshot visuals, non-chronological series on common themes and metaphorical parables, with lesson or moral; c) *teaching* scenes about practical spiritual knowledge involving an instructor or guide (typical in the accounts of many Indigenous people); d) *role-playing* in which the drinker actively participates in the visions, acting within them as in real scenarios, which can simulate real-life rehearsals by providing direct learning;

e) *direct display* with immediate and visceral understanding of the insights in a noetic way by the drinker, as, for example, in the vision of an array of translucent strings connecting all things.

Letheby (2021) agrees with Shanon (2010) that such experiences can lead to a "new knowledge of old facts" and broaden to other psychedelics. This idea resonates with the notion that psychedelic experiences can reveal new layers of meaning in already familiar concepts. On the other hand, Fink (2022) argues that this revelation can occur even with false propositions, which would not constitute true knowledge. In this sense, he proposes that "understanding" is a more appropriate term to describe the effect of psychedelic experiences, as they can deepen our perception of propositions, regardless of their veracity.

In addition, as has been explored by Timmermann *et al.* (2021), the data demonstrate how psychedelics can induce lasting changes in metaphysical belief structures. Letheby (2024) highlights objections regarding whether psychedelics can induce comforting but false metaphysical beliefs when used in psychedelic psychotherapy. Sjöstedt-Hughes (2023), based on Spinoza's metaphysics, proposes integrating metaphysical experiences induced by psychedelics into psychedelic therapy to provide an additional framework for integrating and evaluating experiences. Shanon (2002), in the phenomenology of ayahuasca, while not drawing metaphysical conclusions, refers to Spinoza's intuitive mode of knowing and Merrell-Wolff's introceptive mode that transcends the distinction between knower and known or between subject and object, through the noetic form of direct knowledge that experiences refer to.

At the same time that Spinoza would accept self-evidence as proof of knowledge, Shanon (2002) reminds us of that intuition and introception, by their essence, are outside the domain of knowledge but without closing the philosophical question. Furthermore, Pinheiro (2017) Furthermore, Pinheiro (2017) explores the fallibility of various levels of philosophical discourse (logical, ontological, epistemological, and linguistic), arguing that no knowledge can be considered definitively grounded, as all are culturally and historically conditioned and therefore refutable. Questions about whether the noetic knowledge induced by psychedelics is justified or if the knowledge is genuinely veridical to compose psychedelic therapy, as well as details of this recent therapeutic mode of using psychedelics, are beyond the scope of the present article.

### *Consciousness*

Consciousness remains the great mystery for the philosophy of mind and psychology. It is the provider of connection with the world and, therefore, of knowledge (Shanon, 2002). A fenomenologia, que descreve os fatos da experiência e faz observações preliminares sobre este tópico, destaca três perspectivas principais. A perspectiva substancial considera a consciência em termos ontológicos. A perspectiva estrutural analisa as características estruturais do fenômeno. Por fim, a perspectiva funcional examina como a consciência serve a várias funções cognitivas, incluindo a definição do eu e a atribuição de identidade pessoal (Shanon, 2002).



Self-awareness involves a focus of attention inward, when we reflect on or become aware of the experience of oneself (Morin, 2017). Millière (2020) explores the Self-Awareness Principle (SAP), which posits that all conscious experiences imply some form of self-awareness. He proposes six categories of partial selflessness, in which consciousness exists without certain functional aspects of self-consciousness. Consciousness without (a) *cognitive self-awareness* refers to a state in which the person is conscious but does not reflect their thought processes or themselves as an object of thought. Consciousness without (b) *spatial self-awareness* describes a state where the perception of the *self* in space is absent; the persons does not feel they are in a specific place. Consciousness without (c) *sensation of bodily possession* occurs when the person is conscious but does not feel that the body he perceives is his own. In consciousness without (d) a *sense of bodily agency*<sup>3</sup>, the person is aware of, but does not feel that he is the cause of his physical actions, and there is a disconnect between consciousness and bodily action. Consciousness without (e) a *sense of mental ownership* describes a state in which the person is conscious but does not feel that the thoughts or mental experiences are "their own." Finally, consciousness without (f) *sense of mental agency* involves the presence of consciousness without the sense of being the agent of its mental processes or thoughts. The author further reports that states such as "drug-induced Ego-Dissolution" (DIED), meditation, and dreamless lucid sleep can provide clear counterexamples for SAP, with reports of subjects losing all forms of self-awareness. However, what it means for one form of self-awareness to be more "minimal" than any other is not always explicitly described, although it usually means that such a feature is the most ubiquitous form of self-awareness in conscious experience. The interpretation of these accounts is complex, given the subjective nature of self-awareness and the distinction between phenomenal awareness and access consciousness (Millière, 2020).

However, for Shanon (2002), consciousness is seen as a cognitive system that defines human subjective experience. Thus, the science of consciousness aims to identify the parameters that define it as a cognitive system, not the particular mental states one experiences. In this sense, from a structural phenomenological point of view, he defined eleven parameters that consciousness can vary and are grouped into five categories, namely: 1. Self and its identity: (a) alterations in *agency or mediation* of the consciousness in which the subject perceives a dissociation between the self and the mental content (which may vary in control/lack of control of one's thoughts and the thoughts of others); (b) *transformations* of personal identity, with the perception of being transformed into another person, animal, or object; (c) The *unity* of consciousness may vary with the experience of perceptual or identity splitting, as observed in cases of multiple personality disorder or in shamanic practices of holding different identities in different realms of experience. 2. Contrast and differentiation: (a) the *undifferentiation* of consciousness, in which the clarity of the differentiation between the internal mental world and perceptions of the external world varies, as well as the degrees of undifferentiation between cognitive processes, such as memory, perception, and imagination. (b) Alterations in *individualization*, refer to experiences in which the notion of an individual self dissipates, and yet consciousness is maintained, while the perception is integrated into some kind of

<sup>3</sup> In cognitive psychology, the sense of agency refers to the feeling that we are the causal agents of our own movements and thoughts, linking intentions to actions and their outcomes or effects in the external world (Shanon, 2002).

“superconsciousness” or one may feel that identity is defined in terms of the group rather than individually. 3. Calibration of experience: (a) variations in the perception of *body calibration* that include body size, weight, and posture in space, as well as the perception of body cohesion, with limbs perceived as non-self and changes in the perceptual scale, for example the internal visual field with eyes closed; (b) variations in the *locus* of consciousness, in which individuals experience a change in the location of consciousness, commonly perceived in the head, but during the experiences may move to other parts of the body or out of it; in (c) *time* changes, subjects describe that the temporal linearity and flow rate of psychological time is altered, from slower to faster, and can reach a sphere where psychological time loses its relevance. 4. Reflective self-awareness: Shanon (2002) points out that *self-awareness* can be maintained even when consciousness and personal identity undergo radical changes, that totally absent states of self-awareness are relatively rare, and refer to an issue of absorptive seduction and "a matter of a decision" (Shanon, 2002, p. 204) in which a residue of the normal self can be achieved even when all other facets of consciousness are completely altered. According to the author, this residue is a skill gained through the cumulative experience of drinking tea. 5. Intentionality and attribution of reality: (a) alterations in the perception of *intentionality* bring phenomenological indications for the possibility of mental states without content or direction towards an object, described as pure consciousness; (b) *knowledge and conferral of reality* concern the intensification and sensory qualities and the noetics of the experience.

Here, it is pertinent to consider that one of the elements raised in the experience with entheogens is the temporary dissolution of notions and boundaries of the self, which is one of the characteristics of the mystical experience (Taves, 2020) and has been considered one of the most relevant for psychedelic therapy (Letheby & Gerrans, 2017). The epistemological question triggered is whether there really are states completely devoid of self-awareness (Letheby, 2024). The psychedelic argument against PAS faces challenges, especially regarding the credibility of retrospective phenomenological accounts of states of total dissolution of the self. Metzinger (2004) argues that such accounts are self-contradictory, as they assert that the self was absent in the previous experience, while assuming that the self was present to report the experience. Fink (2020) explores various interpretations of these accounts and concludes that, although some do not generate contradictions, the contradiction persists if the accounts are understood as describing a complete dissolution of the ego. Sebastián (2020) suggests that these states can best be interpreted as experiences of ego expansion. He argues that relevant psychedelic experience reports are consistent with the presence of this feature and suggests that descriptions of these experiences as involving "loss of the total self" may result from interpretive biases caused by the widespread belief in a connection between the psychedelic experience and Buddhist meditation practice, since first-person consciousness is always maintained. In contrast, Millière (2020) argues that there is no contradiction because the reports assert the absence of self-awareness, a phenomenological characteristic, rather than the absence of the metaphysical self. Millière also questions Metzinger's criticism based on autobiographical memory, arguing that the current scientific understanding of these mechanisms does not undermine confidence in these reports. However, Shanon (2002) addresses this issue from the perspective of self-transformations, which makes sense in relation to Indigenous groups that use these substances and perceive the self as interdependent of nature.

Research on psychedelics is thus at an inflection point, where ethics, epistemology, and decoloniality intertwine. In fact, ego dissolution is not a common concept for native ayahuasca users. A complete loss of the sense of "I" and "me" does not seem to be expected in naturalistic experiences with the sacred brew (Shanon, 2002), as opposed to psilocybin and 5-MeO-DMT, for example (Sebastián, 2020). LSD has also been shown to be less susceptible to inducing ego dissolution than psilocybin (Liechti *et al.*, 2017). Furthermore, in a comparative study of psychedelics, mystical experiences related to "divine encounters" on ayahuasca and DMT were indistinguishable from each other but phenomenologically different from those related to psilocybin and LSD (Griffiths *et al.*, 2019). This makes us question the homogeneity with which Westerners treat entheogenic experiences.

In the case of ayahuasca, the transformations of the self and not exclusively its loss in a void seem to be a fundamental point of the experience. Along these lines and in agreement with the description of indigenous perspectivism (Albuquerque, 2009), Langdon (1996) points out that shamanism includes a fundamental principle of transformation, that is, the eternal possibility of the entities of the universe transforming themselves into others as metaphorical expressions of the same element, seen from different sides and domains of the universe.

Finally, it is essential to cross disciplinary boundaries and suspend assumptions in the name of traditional concepts and practices (Labate *et al.*, 2022) and consider Indigenous knowledge to do epistemic justice (Freitas, 2023b). Overall, according to Freitas (2023b), there are many philosophical themes that entheogens can trigger, which should be further thought out and developed within the phenomenological framework, including parameters of intersubjectivity, the continuous flow of the world, intuition, and metamorphoses of life.

### **3. The photo and the theater: considerations on the representational and presentational theory of mind**

Cognitive theory, explicitly or implicitly, always takes a stance on the foundations of cognition. The Representational-Computational View of the Mind (RCVM) postulates that the mind is essentially a symbol manipulator. This predetermines the type of model approach and explains cognitive processes. By adopting this view, cognitive science may inadvertently apply computational characteristics to human psychology, ignoring the crucial differences between humans and machines. It confines the mystery to fit the mind rather than expanding the mind to comprehend the mystery (Shanon, 2013). This perspective confronts fundamental questions about the nature of intelligence, agency, and identity that cannot be dismissed as merely metaphysical.

In this sense, clearly defining cognitive activities and adopting a phenomenological approach to understanding cognition, beyond the limits of a symbolic-representational, connectionist, or neurophysiological mechanics, is vital for a decolonial approach to cognition. This section discusses critiques of computational theories of the mind and the presentational alternative proposed by philosopher and cognitive psychologist Benny Shanon, based on studies with ayahuasca, which have been extended to the broader field of cognitive studies.

### *Critiques of representational theory*

Cognitivism and associated psychedelic science follow assumptions about psychedelics and cognition that are formulated in terms of individual-centered processes and internal psychological mechanisms, in a mind-computer analogy. Shanon (2013) highlights four lines of criticism of the RCVM, including the lack of explanation on how symbol referencing occurs and the inability to offer a complete account of the cognitive system's achievements through the computational manipulation of symbols alone.

The first line of criticism refers to the limitations of semantic representations in knowledge. The limitless variation of cognitive expression in different contexts and sensitivity to the environment suggest that the cognitive system cannot be described as a fixed, well-defined abstract code, such as a photo in pixels. Detectors of characteristics of hierarchical neurophysiological systems cannot be defined in isolation. However, they must be described in terms of biology and the organism's interaction with the world (Shanon, 2013). Shanon takes up the concept of *affordance* from Gibson's ecopsychology and indicates:

Organisms perceive the world in terms of their interaction with it. Thus, the objects of one's perception are characterized not in terms of the attributes of things but in terms of the interactive coupling of perceiving agents and the constituents of their environment. Rather than features or dimensions that define things as such, the parameters of cognition are affordances – the patterns of action made possible by the coupling of the organism and the environment. Examples of affordances are 'passable', 'edible', 'sittable', 'flyable' (Shanon, 2013, p.126).

Jorba (2020) proposes that in order to understand conscious experience, we can integrate the concept of *affordance* into what Husserl called cognitive horizons. These horizons refer to the phenomenological idea that perception and understanding are always contextual and bring possible meanings and actions, informed between past and future (Verissimo, 2015). The *affordances*, then, would be specific implementations within the framework of horizons that unfold and develop toward action (Jorba, 2020).

In the context of cognitive coding and recoding, Shanon (2013) suggests that metaphor reflects the basic nature of the human psyche because it allows the expression of affective experiences and the creation of novelty. Being plural and open-ended, metaphors allow for the expression of what literalness cannot. Therefore, they challenge the fixation of meanings and standard encoding of the RCVM while creating new contexts by juxtaposing words in new ways, allowing for new meanings.

In the second line of criticism against representationalism, it is understood, through functionalist reasoning, that cognition cannot be seen as an autonomous system. This means that cognition is deeply intertwined with other systems (the body, the world, the social other, and non-cognitive systems) and cannot be isolated in terms of internal representations. These factors are fundamental in the execution of behaviors, especially evident in child development. The RCVM thus creates insurmountable gaps in the cognitive system and fails to capture essential aspects of psychological phenomenology, even in its development (Shanon, 2013). Moreover, the

separation between cognitive and non-cognitive behavior reflects the limitations of the representational paradigm rather than psychological reality. In fact, action and interaction with the world precede symbolic cognition, with practical actions overcoming semantic knowledge, aspects already emphasized by classic authors of developmental psychology such as Piaget and Vygotsky.

The third line of criticism is perhaps one of the central ones in Shanon's (2013) perspective and refers to the temporal dynamics of cognition. The photographic, static, and ahistorical view of cognitive systems, which are essential for representational modeling, lose their support due to a lack of dynamism. Human cognition is marked by its temporal nature:

Human beings live in time. Even the most stationary scene, one in which nothing seems to happen, and nothing changes, extends in time and is so perceived. Likewise, all we do is being realized as we act in time. Our actions can be slow or fast, on-going or abrupt, but they can never escape time (Shanon, 2013, p.286).

In this direction, representations and computations are not principles in cognition; they are products of cognitive development and cannot serve as a basis for cognitive modeling. The cognitive system generates temporally dynamic and meaningful representations, not just a processor of static images. While computers may outperform humans in specific tasks involving data processing and complex calculations, they fail to perform tasks that are easy for a young child, such as expressing emotions or interpreting malformed messages (Shanon, 2013). Human cognition is predominantly unconscious, operating on a timescale that transcends conscious introspection. Conversations flow without pre-scripted paths, and the perception of time is mediated by the flow of events, not by time itself. The ability to remember and think without the immediate presence of external stimuli is remarkable and enabled by creating dynamic virtual entities in the mind (Shanon, 2013).

Finally, the fourth line of criticism pertains to conceptual issues related to epistemology. The underlying hypotheses that behavior is mentally represented are more complex. For example, memory is influenced by contextual and non-cognitive factors such as emotional state and social interaction, contradicting the view that memory is simply the retrieval of stored representations. This suggests that memory can be direct, without representational mediation, while semantic distance can vary depending on the context. This challenges the assumption that knowledge is organized into a fixed and determinate repertoire of representations (Shanon, 2013).

The uncritical adoption of the computational metaphor can restrict scientific imagination, tying researchers to a limited framework of thought. Although heuristically productive, the computational metaphor can close off theoretical possibilities rather than open up new avenues for research (Shanon, 2013). The RCVM imposes unnecessary limitations on cognition, reflecting an outdated worldview that does not hold up under deeper phenomenological analysis. Cognition must be freed from these constraints to move beyond the RCVM, exploring alternatives that recognize the complexity and non-representational nature of the human mind (Shanon, 2013; Newen *et al.*, 2018).

### ***Presentational theory of cognition***

Cognitive psychologists generally ignore the problem of experience. However, philosophers approach it as the problem of qualia, questioning whether the phenomenological aspects of experience can be explained in a reducible way. In addition, the representational-computational model fails to capture the essential qualities of human cognition, such as understanding, experience, and consciousness (Shanon, 2013; Newen *et al.*, 2018).

On the other hand, ecopsychological approaches can constitute a decolonial perspective of human psychology and in the psychedelic studies by overcoming the dualisms of nature-psyche, psyche-society, and nature-society (Fisher, 2019). Cognitive ecopsychology is a non-representational approach that follows a third way in relation to cognitivism and behaviorism (Shanon, 2013). This approach is reflected in the contemporary dynamic, embodied, and situated cognitive sciences (Lobo *et al.*, 2018) initiated by James Gibson, influenced by William James pragmatism, which inspired Shanon (2013) to develop the presentational approach we will explain below.

This ecopsychological mode of thinking is consistent with recent situated approaches that hold that cognition is embodied, active, affective, and extended (Risku e Rogl, 2020). In terms of terminology, situated cognition asserts that knowledge emerges from specific contexts, integrating with lived situations. Embodied cognition (or incarnate) highlights the role of the body in cognitive processing and suggests that the mind is shaped by bodily interaction with the environment (Risku e Rogl, 2020). In distributed cognition, it is understood that cognition transcends the individual, spreading across people, tools, and environments, with cultural and technological artifacts facilitating this process (Risku e Rogl, 2020). Embedded cognition highlights the interdependence of cognitive systems with the surrounding environment. In contrast, extended cognition sees the mind as something that includes the environment and artifacts, which become functional extensions of cognitive capacity (Risku e Rogl, 2020).

Commonly referred to as the 4E (enacted, embodied, embedded, extended), cognition is inherently located within a context (enacted) that includes the body (embodied), the sociocultural aspect (embedded) and the physical environment (extended) (Newen *et al.*, 2018). However, it is also temporal (Vogel *et al.*, 2020). Just as the cognitive system is designed to act in the world, it is also designed to act in time, according to Shanon (2013):

It is not that there is a cognitive system, and the factor time is added to it so as to account for how the system changes and develops. Rather, dynamic change over time (as contrasted with fixed structures coupled with a repertory of computational operations) defines the cognitive system and underlies its mode of operation and all its accomplishments. As pointed out in the existential and phenomenological philosophies of Bergson, Heidegger, Sartre and Merleau-Ponty, without time, being would become meaningless and self-hood and individual identity would be inconceivable (Shanon, 2013, p. 414)

The Presentational Theory of Mind (PTM) emphasizes a cognitive substrate with possesses contextual sensitivity, body-world integration, and temporal dynamism. This substrate must be capable of responding to contextual variations without predefined constraints, be intrinsically linked to the physical body (not just the brain), to the social environment of the agent, and be dynamic enough to reflect both the agent's past history and future projections (Shanon, 2013). This theory encompasses both typical cognition and psychedelic cognition by emphasizing direct experience and the presentation of the world as it is perceived. It focuses on cognition as an activity and representations as products, using a phenomenological approach as the key to understand both standard and altered states of the mind and consciousness.

According to the author, the world is a matrix of meanings that cannot be separated from the beings that live in it. The objects of perception are not sensory data, but patterns invested with meaning. Perception is direct, without the need for any mediating representation, and memory is a re-presentation in the present. Therefore, cognitive psychology must be concerned with meaning, forms of expression, development, function, and use. This psychology is interactive, non-procedural, and is concerned with the surface of cognitive expressions rather than the underlying mechanisms (Shanon, 2013):

Immersed in the world, I see a scene. In itself, the scene is not made up of meaningful objects. It is in my act of seeing that the meaningful objects are generated (Shanon, 2013, p. 432).

Shanon (2013) points out that cognitive operations reflect universal principles governing our internal world and external interactions. It is acknowledged that cognitive performance is not autonomous but deeply rooted in synergy with the environment, where the body and social context are integral parts (and not mere influencers) of the ability to think and process information. Cognitive scientists should explore the emergent regularities of interaction between internal and external domains, encouraging an expansion of the research field to encompass cognition's manifestations in the physical and social world. Given that, in Shanon's view of the mind, the basic capacity of the cognitive system is to act in the world, the significance of cognitive material being like concrete entities in the external world is obvious.

From this, the key concept called *crystallization* involves the dynamic formation of concrete and articulated expressions, such as words, thoughts, mental images, memories, and dreams, which are generated both internally and in response to the external environment. The role of crystallization (and the phenomenon of consciousness that follows) is to create objects for interaction in the internal world of the cognitive agent. " This is most advantageous, for such objects are not always available in the real world outside (Shanon, 2013, p. 453)." In terms of time, crystallization refers to the "present, which has neither well-demarcated boundaries, nor any predetermined magnitude" (Shanon, 2013, p. 432), as the maximum time we can crystallize and this present can vary in duration, be contracted or expanded.

The expressions resulting from crystallization are called *presentations*. They may have two profiles, dependent on context, which are characterized in terms of adjectives referred to as representational (presentations),

with well-defined characteristics, and presentational (presentations), which "blur the distinction between content and medium" (Shanon, 2013, p. 433), are more fluid. The orthogonal interaction between the representational and the presentational reflects the complexity of human cognition and influences all temporal scales, from individual development to cultural evolution. This approach allows for a richer and more direct understanding of ecologically situated subjective experience. Rather than seeing the mind as a passive mirror of the world, PTM sees the mind as an active participant in the formation of experience. Thus, human cognitive life can be considered as a continuous interaction between the representational and the presentational (Shanon, 2013).

Together, the representational and the presentational define two poles that span the universe of cognitive activity. Structurally, cognitive expressions are characterized by different profiles along the representational-presentational continuum. At the two extremes are profiles exhibiting either all or none of the properties specified. In between are profiles exhibiting some of these properties to different degrees. This variation is, of course, a source of great cognitive richness. Another is the fact that both the type of expression and the mode of interpretation can independently vary along the presentational-representational continuum (Shanon, 2013, p. 434).

The fundamental distinction between them is autonomy, which can be understood through two main manifestations: autonomy in relation to other cognitive materials and autonomy in relation to time (Shanon, 2013). At the same time, integration allows cognitive agents to adapt their strategies according to the needs of the situation, ensuring effectiveness both in tasks that require detachment and analysis and in tasks that require immediate engagement and response (Shanon, 2013). In this sense, the psychology of the mind must:

posit both meaning and the tie with the non-cognitive from the very start. In other words, the basic terms of psychology should already be imbued with meaning and should tie together the cognitive and the non-cognitive – mind and body, mind and world, mind and social other, cognition and the non-cognitive faculties of mind (Shanon, 2013, p. 519).

Finally, PTM acknowledges that the way we perceive and understand the world is deeply influenced by our cultural, historical, and personal context. Shanon (2013) explains that Western culture is described as predominantly representational, focused on language and formal logic, seeking to understand the world through objective and detached analysis. This approach has aided in technological mastery and the ability to live in adverse conditions. On the other hand, presentational culture is characterized by a more intimate and empathetic connection with the world, seeking understanding through harmony and sensitivity to the inherent meanings in the environment. This theory aligns closely with psychedelic studies and can provide a framework for understanding how psychedelic substances affect the presentation of the world, rather than merely creating altered internal representations. According to the author, both representational and presentational elements are recognized in different cultures and cultural expressions, suggesting that a proper understanding requires the integration of both adjectives (Shanon, 2013).



#### 4. Indigenous epistemologies and decolonial cognition

The first step to undo the unjust effects of discrimination, cultural appropriation, and unequal exchanges between the Global North and South is the interaction between recognizing the errors of the past and creating a decolonial future with alternative policies regarding entheogenic knowledge (Hauskeller *et al.*, 2023). This interaction should be crystallized (in presentational terms) in the present of psychedelic studies. Since Western psychedelic science operates as an extension of a Western medicalized framework, it reflects all the same limitations and replicates existing power structures (Sevelius, 2017).

The Western, depoliticized therapeutization and the development of pharmaceuticals related to entheogenic substances are accompanied by a massifying process that centralizes mental disorders within the individual. This biomedical model — which we will call the "hospitalization" of ayahuasca, mushrooms, jurema, and other entheogens — triggers conceptions and practices of Western science (representational and reductionist) as if they were legitimizing traditional knowledge, while forgetting that this knowledge is valid on its terms (Labate *et al.*, 2022). The same chart previously used for antidepressants is being revisited in media solutions presenting a magical pill that would work where conventional medications have failed (Devenot *et al.*, 2022). Historically, biomedical discourse has been used in Brazil and the Western world to discredit, marginalize, and repress popular therapeutic practices (Labate *et al.*, 2022). Understanding that ayahuasca does not cure depression, but it may cure, for example, goes beyond fixed and limited Western representations based on misguided, decontextualized models of psychological disorders. Although entheogens can contribute to powerful and transformative solutions for the health and planetary crisis, they can also lose meaning when deprived of their cultural container (Celidwen *et al.*, 2023). No Indigenous knowledge was accidentally added to the use of the plants; rather they are part of the medicinal foundations of these groups (Dumit e Sanabria, 2022). The quest for a philosophy that decolonizes the formations of knowledge is an ethical quest that recognizes the needs, complexities, histories, legacies, and methods of colonization (Hauskeller *et al.*, 2023).

To decolonize (or dehospitalize) entheogens, we must alter the foundational understanding of what characterizes mental illnesses. This involves conducting a historical analysis of the paradoxes associated with the War on Drugs and the contemporary Psychedelic Renaissance (George *et al.*, 2019), addressing the root causes of inequality, and ensuring access to safe food, water, shelter, education, and health. Furthermore, it's crucial to address the root causes of inequality and ensure access to safe food, water, shelter, education, and health (Devenot, 2023). This means deconstructing patriarchal legacies and power dynamics centered on wealth creation and capital accumulation (Hauskeller & Schwarz, 2023). The mental health crisis demands drastic changes in colonial systems and the salvific hallucinations that dysfunctional economic and scientific elites perpetuate with their medicalizing hegemony (Devenot, 2023). Reviewing power hierarchies represented consciously or unconsciously should be part of mental openness, going beyond the traps that psychedelics may bring (Hauskeller & Schwarz, 2023).

The discourse of equivalence between Indigenous therapeutic use and the use of ayahuasca by non-Indigenous people in Brazil (whether in traditional religious contexts or urban neo-ayahuasqueira modalities) does not align with the epistemic reality of Indigenous communities, as these practices have only recently intersected (Labate *et al.*, 2022; Smith *et al.*, 2022). The homogenization and stereotyping (the name ayahuasca being an example, as there are various types of ayahuasca), a requirement for biomedical practice with psychedelics, suggests similar uses when in fact there is a vast array and complex history (Hauskeller *et al.*, 2023).

Scientists who believe in the hospitalization of entheogens or brain imaging within the forest may inscribe their colonial, medicalizing perspectives into a knowledge system that transcends exclusively biomedical healing models (Labate *et al.*, 2022). Moreover, the cultural reductivism implied in the standardization of the DMT of ayahuasca (and jurema), for example, summarizes an unjustified hierarchy of scientific knowledge about Indigenous knowledge systems, which can even lead to serious consequences for the efficacy of the proposed treatment (Cordeiro, 2023).

White, Western, wealthy men have continually attempted to take ownership of psychedelic knowledge away from native groups, influencing the history of the substances by seeking to explain the way of life of non-Western peoples (Hauskeller *et al.*, 2023). We can recognize Wasson's legacy without reproducing his discourse and not to the detriment of Maria Sabina's legacy or the current knowledge of Indigenous groups (Spiers *et al.*, 2024). In addition, much of the results and therapeutic prescriptions of psychedelics are outlined with underrepresentation of Indigenous, Black, gender diverse (psychedelic studies often conflate sex and gender), and other marginalized populations (Strauss *et al.*, 2021; Blevins, 2023)

Biocolonialism refers to how Western scientists appropriate natural resources and favor a system of biopiracy (Cordeiro, 2023; Karoll, 2024) of psychedelic plants and fungi to turn them into a dropper ecstasy (Devenot *et al.*, 2022). Cases like the vulnerability generated by the bioprospecting of peyote and other entheogens, for example, prove how Indigenous resources are imprudently exploited, even preventing native peoples from accessing them due to new patent rights, laws, or scarcity (Cordeiro, 2023).

Furthermore, this decontextualized appropriation of Indigenous traditional medicines through unauthorized research and drug development is arguably harmful to Indigenous health and land rights (Celidwen *et al.*, 2023). The rhetoric of psychedelic hype is stained with magical-religious utopian aspirations, which provides a vision of the instrumentalization of psychedelics as a tool in a world project that justifies the increase in inequalities by global financial and technological elites (Devenot, 2023). While the "spectacle" – this moment in which overdeveloped capitalism has become an image – unfolds in consumer society, it is only from the field of actual reality, from practice, that one can counter the domination of ideological materialization over human life (Santos, 2016). For example, recognizing that plants and fungi are endowed with agency with which it is possible to communicate, as the phenomenology of experiences reveals (Shanon, 2010), and that they are an integral part of a sacred landscape challenges the conventional view of mere psychoactive substances (Labate *et al.*, 2022; Williams *et al.*, 2022). When the "brujo" is under the effect of mushrooms it is the mushroom that speaks, not the

"brujo" (Spiers *et al.*, 2024). For Indigenous peoples, the (mother) earth is the focus, and the desire of Westerners to decolonize their minds cannot happen unless ongoing injustices are addressed and they work as allies to restore Indigenous knowledge systems with engagement that primarily involves returning stolen land (Williams *et al.*, 2022).

Ecopsychology, from a decolonial perspective, criticizes the suffering and destruction historically inflicted on both human life and "more-than-human life" under capitalist domination that violates life in general (Fisher, 2019). Indigenous knowledge, in alliance with emerging sciences, can offer a less appropriative engagement and a renewed understanding how sacred psychedelics enable therapeutic change (Tempone-Wiltshire e Dowie, 2023). Therefore, an ontological shift is necessary, with a critical reassessment of Western conceptions of reality, emphasizing other epistemologies, such as Indigenous ones that recognize the interconnectedness between humans, non-humans, and inanimate matter and diverge from the Western scientific paradigm (Williams *et al.*, 2022).

Indigenous healing traditions orient their applications in the relationality that understands lives as interdependent and dependent on ethical relationships with people, ancestors, plants and animals, and the natural world in general (Celidwen *et al.*, 2023). According to Csordas (2016), the notion of healing outlined in some spiritual and religious contexts is an endless process of adding meanings. In this sense, cognitive phenomenology can only be apprehended from the subjective standpoint of the agent, so that one may have a complete account of brain states and yet not be able to understand cognitive experiences (Shanon, 2013). The perspectivism, panpsychism, and animism present in Indigenous perceptions imply holistic reasoning (of a living cosmos) in which cognition is situated in the mind-body connection of ritual practice as complex, adaptive, and self-organized systems (Tempone-Wiltshire & Dowie, 2023). Science and logical analysis have their place, but intuition, empathy, and environment connection are essential for a comprehensive and adaptive understanding of the world (Shanon, 2013).

Western thought conceives of nature-psyche, psyche-society, and society-nature relationships operated by power structures in hierarchical dualisms (Fisher, 2019). Thus, colonization serves as an abstract term to capture a deeply varied set of oppressions and abuses. At the same time, decolonization requires actively challenging dualistic logic, going beyond repatriation and material compensation, but aiming to eliminate the remnants of colonial power structures (Hauskeller *et al.*, 2023).

It is important to recognize that Indigenous voices and leaders need to be present in psychedelic science. In this sense, a group of researchers composed of Indigenous people and academics (Celidwen *et al.*, 2023) delineated eight ethical principles to guide Western psychedelic practice: 1. *Reverence for Mother Nature*: Opposing spiritual consumerism, this principle promotes better relationships between humans, non-humans, and the earth. 2. *Respect for Indigenous Ways of Knowing and Being*: This involves properly referencing traditions, including medicines, rituals, and ceremonial use. 3. *Responsibility*: There is a need for accountability in perpetuating harmful practices and ensuring inclusive and respectful practices that oppose the exploitation, capitalization, and appropriation of Indigenous medicines while promoting the well-being and healthcare access of these populations. 4. *Relevance of*

*Indigenous Knowledge:* Efforts should be made to integrate Indigenous intellectual foundations into the science, therapy, and curricula of Western psychedelic practices. 5. *Regulation:* The tangible and intangible use of traditional medicines should be regulated with benefits shared with Indigenous communities as they see fit. 6. *Reparation and Benefit Sharing:* Institutions and organizations using psychedelics should make reparations and share benefits by restituting cultural, intellectual, religious, and spiritual property to Indigenous communities. 7. *Restoration of Indigenous Authority:* Indigenous voices should be prioritized in psychedelic sciences, therapies, and training deliberations. 8. *Reconciliation:* Active participation of Indigenous people in the development of Western psychedelic research and practices is essential to mend relationships between Indigenous and Western communities.

The land and relationships with nature are the source of Indigenous philosophies and identities (Williams *et al.*, 2022). This means that decolonization implies taking the concepts, categories, and knowledge seriously, including plants with their consciousness and agencies, subjectivity, and intentionality in the nature-culture coupling (Labate *et al.*, 2022).

The question Shanon (2013) considers the psychedelic experience as a work of art, or rather an artistic presentation, contrasts with the timeless representational philosophy. For example, when appreciating a work of art, the presentational dynamic suggests that you are not simply creating an internal representation of the artwork. Instead, you are directly engaged with the artwork, bringing your own perspective and context to the experience. Your appreciation of the artwork is not just an internal representation, but a rich and complex experience shaped by your active involvement and personal context (Shanon, 2013). Questions arise, for instance, about whether it is possible to evaluate a work of art based on its therapeutic mechanisms or if it is even important to evaluate these mechanisms. Shanon (2013) believes that cognitive psychology (decolonial – we add) can focus on the phenomenology of experiences instead of their supposed brain mechanisms of representations. According to Freitas (2023a) shamanic worldviews consider the equitable importance of species, such that the mission of the "artist" (our emphasis) is to make the planet a good place for all forms of life to thrive with it.

Finally, we agree with Labate *et al.* (2022) in the expectation that we can move away from a Western (and representational) logic through direct involvement, advocacy, and Indigenous agency in knowledge production. One of the goals of a decolonial ethic is to avoid unconsciously reifying insidious colonial logic to overcome the desire to possess and control psychedelics, which has taken hold of scientific establishments (Hauskeller *et al.*, 2023). In other words, it is necessary to consider the dynamic sacred landscape and the various ritual elements that cannot be grouped into the biomedical hospital under the name “*setting*” (Williams *et al.*, 2022).

In the (decolonial, ecological, and) presentational model of cognition, cognitive agents are encouraged to add their contributions to the history of cognition, where each new perspective and discovery enriches the collective understanding and highlights the beauty and complexity of the human mind (Shanon, 2013). Therefore, a decolonial (Devenot, 2023), temporal, and presentational methodology (Shanon, 2013) contribute to a subfield of critical studies that interrogates the political, economic, social, and cognitive implications of the hospitalization of entheogens.

## 5. Final thoughts

This article aimed to characterize the intricate interplay between psychedelics, knowledge, consciousness, and cognition through a decolonial perspective. The enduring legacy of colonialism within the psychedelic industry, particularly under the guise of healing, necessitates a critical reorientation of our research methodologies to resist the invasion of neoliberal Western ideologies. Thus, specifically, we aimed to characterize psychedelics with a focus on epistemology and consciousness, and to discuss the presentational ecopsychological theory of the mind. This theory is deemed suitable for psychedelic studies that should be based on phenomenology rather than biomedicine. Additionally, the article aimed to contextualize this theory from a decolonial perspective to eliminate the remnants that hinder a comprehensive understanding of the situated, contextual, and temporal mind.

The longitudinal history of entheogens, which spans thousands of years and continues to evolve today, underscores the importance of these substances in various cultural contexts. The medicalization of entheogens often introduces an individualistic and segregationist perspective, which starkly contrasts with the integrative perspectives offered by ecological epistemologies. However, the relationship between the mind and the world, as well as the fundamental nature of consciousness, persistently challenge compartmentalized explanations and necessitate more integrated approaches that consider philosophical, scientific, and mystical perspectives.

Cognition is more than the sum of its parts; it is a lived experience, a constantly evolving narrative. While representationalists seek analytical (and illusory) objectivity, presentationalists aim to understand the world through essential dynamic connections. The balance between well-defined crystallizations and fluid metamorphic crystallizations composes the symphony of cognition, which is ecological at its core. It is necessary to replace the capacity to manipulate symbols with the capacity to act and crystallize cognitive activity into expressive manifestations (Shanon, 2013).

Therefore, cognitive science, decolonial epistemology, and philosophy inevitably converge on this path of knowledge, bringing their ethical and ontological ramifications. This convergence is necessary to address the challenges posed by psychedelic studies, which envision a rebirth of something that never died, such as the use of entheogens, Indigenous philosophies, and interdependence with Mother Nature. In this sense, the representational narratives that insidiously affect the integration of nature, psyche, and society must be revised and rewritten by approaches that undo colonial misconceptions about subjectivities and practices.

The inclusion of Indigenous and marginalized populations enriches the facets of existence in the considerably unpredictable world of psychedelic research. It is urgent to demedicalize entheogens by recognizing and repairing the damage done to the peoples who have been healing with them for many years. Understanding the power relations that permeate biomedical science and actively conjecturing eco-epistemological healing will allow for the presentational incorporation of the cognitive theater beyond the fundamental limits of

representations. Regarding this stationary limitation, as Shanon (2013, p. 541) stated, “In God’s eyes, this might be cognition; in human practice it is definitely not”.

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