



ESSAY

Reconsidering Context in Psychedelic Research: Ritual Emergent Mechanisms and the Unified Field

Heather D. Lutz

hdl3z@virginia.edu; hlutz@miu.edu

HIGHLIGHTS

Aspects of ritual settings in early human societies still likely play an important role in the efficacy of psychedelics used in modern therapy.

ABSTRACT

The outcomes of recent psychedelic research have been attracting more public attention in the media along with an increase in private funding. This research has primarily been conducted in a clinical setting while attention to context has largely been ignored. Entheogens have been used by early man in ritual settings as far back as recorded history can be found. Modern clinical use has only been occurring within the last century. This leaves much to explore in terms of the context in which such potent treatments have effect. This manuscript provides a conceptual framework for entheogenic rituals, the effects, and how they could be scientifically studied. It examines the therapeutic use of psychedelics from both the biomedical perspective of the diagnosis and treatment model, and as contrasted with the ritual context. It discusses explicit and implicit ritual attributes that may play a role in the healing process. Additionally, the manuscript identifies cultural healing assumptions embedded in psychedelic study, in favor of mechanistic causation that could be affecting a dismissal of the value of the ritual context. The paper examines the ritual context including component parts, introduces the concept of emergent mechanisms for describing non-physical experiences including analyzing contrasting paradigms of healing, proposes considerations for alternative research design philosophy, and introduces a framework for how entheogenic rituals research may be conceptualized and implemented.

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Psychopharmacology, psychedelics, entheogens, rituals, healing paradigms, cultural psychology, cultural medicine, emergent mechanisms, unified field theory

INTRODUCTION

Throughout history and into modern day practices, evidence exists demonstrating that global indigenous communities, ancient Greeks, paleo-Christians, Renaissance witches, Bronze and Stone age ancestors, and postmodern syncretic religions have relied on psychoactive pharmacology for healing and spiritual growth (Gordon Wasson et al., 2008; Muraresku, 2020; Piper, 2013; Ruck et al., 1979; Rush, 2013; Valamoti, 2013). However, the historical use of drugs, entheogens specifically, and their intentional

purposes particularly in Western civilization is under-researched (Hillman, 2008; Muraresku, 2020). With the rise of new technology for archeobotanical and archeochemical investigation, tools are becoming available for objective analysis of the use of drugs in antiquity (Muraresku, 2020). These tools will provide objective chemical and botanical data. This data coupled with the context in which they are found will allow scientists to be able to determine specifics about their form and function.

Entheogen is the particular academic term given



to psychoactive drugs formulated from plants (Tupper, 2009a). The term entheogen, derived from the Greek root word *entheos* meaning the God within, connotes connecting with the experience of the Divine that resides in all beings (Muraresku, 2020; Ruck et al., 1979; Winkelman, 2007). In the spiritual healing context, the plants are powerful, sacred medicine that provide access to the spirit realms for health, well-being, and guidance (Homer, 2009; Muraresku, 2020; Winkelman, 2007). Entheogens provide for the occurrence of a profound altered state of consciousness for those who ingest them. Retrieved from a variety of native plant sources throughout history, entheogens have been used as a source for knowledge acquisition, divine contact, and healing (Gordon Wasson et al., 2008; Merlin, 2003; Muraresku, 2020). A number of researchers believe that the historical reliance on entheogens may have played a significant role in the evolution of consciousness throughout history (Gordon Wasson et al., 2008; McKenna, 1999; Muraresku, 2020; Piper, 2013; Ruck et al., 1979; Schultes, 1998). Postmodern scientific exploration has produced synthetic forms of psychoactive drugs, referred to more commonly as psychedelics, prompting investigation of the therapeutic potential of the use of psychedelics and entheogens.

This manuscript will use the term entheogen to refer to any form of psychoactive substances occurring naturally in plants used in a spiritual healing context. The general term for hallucinogenic psychoactive drugs in the Western clinical setting is psychedelics, which will be used in this paper to refer to synthetically created treatments administered in a Western clinical setting. This manuscript will examine the historical entheogenic use, more specifically in a ritual context. It will describe the state of the field for modern psychedelic research conducted in both clinical settings and in modern spiritual ceremonies, for elucidating their purpose. It will review attributes from ceremonial contexts along with a proposal for emergent mechanisms that are ripe for investigation of their contributions to ritual effects and impact. It proposes a hypothesis for rituals to be perceived as a gateway to a unified field of information along with potential mechanisms for accessing it and the emergent mechanisms contained within it. Finally, it concludes with a suggestion for an alternative way to conceptualize entheogenic healing rituals and considerations for advancing entheogenic/psychedelic research.

PSYCHEDELIC CLINICAL RESEARCH

Psychiatry began to understand the biological correlations of mental illness, prompting the application of pharmacological treatments for it in the 1950s (Winkelman, 2007). It was during this period that psychedelics

were discovered for their curative abilities in the Western world's academic disciplines of psychology and medicine. During the mid-twentieth century, psychedelic research flourished primarily in clinical settings and in a more limited fashion through ethnographic studies conducted in spiritual settings. This research evidenced the powerful emotional, cognitive, and therapeutic reactions associated with psychedelic and entheogenic ingestion. The close of the 1960s brought a shift in ideology that would essentially eradicate the scope of this activity. In 1970, governmental restrictions on the research and therapeutic use of psychedelics made it illegal to possess any of these substances (Muraresku, 2020; Winkelman, 2007).

In a circumspective overview of this 20th century psychedelic research, Carhart-Harris and Goodwin (2017) concluded that reported outcomes from this early psychedelic research were consistent with potential efficacy; however, most of the studies were not appropriately designed to demonstrate efficacy conclusively. The subjective, observational, and population-based data indicate a positive association between psychedelic drug use and mental health with some caveats. A 2016 meta-analysis of 19 studies by Rucker et al. (2016) on psychedelic treatment for mood disorders, published between 1949 and 1973, found that 79% of patients showed "clinically-judged" improvement post-treatment. A meta-analysis by Krebs and Johansen (2012) of studies on LSD treatment for alcoholism in the 1950s and 1960s reported similar findings of statistically significant treatment efficacy with short-term benefits. The primary issues identified in these analyses were an absence of standardized diagnostic techniques, measures of symptom severity, and lack of randomization and control conditions in these studies.

The 21st century brought a renewed focus in academia on entheogens and psychedelics as a therapeutic intervention (Young, 2022). Researchers at The Center for Psychedelic and Consciousness Research at Johns Hopkins University were the first to obtain regulatory approval from the United States government to re-establish research in the therapeutic use of psychedelics (Lewis, 2020). Since this time, this institute has been active in running clinical trials for treatment of addiction, existential distress caused by life-threatening illness, and treatment-resistant depression, and has published more than 115 peer-reviewed articles about treatment in a clinical context (Center for Psychedelic & Consciousness Research, n.d.). In the last several years, New York University, Harbor Medical Center at the University of California Los Angeles, University of California San Francisco, The Imperial College of London, and Yale University all have begun clinical trials on psychedelic-assisted therapies (Muraresku, 2020). Studies have primarily focused on psychedelic treatment of addiction,

TABLE 1. Recently Published Systematic Reviews and Meta-Analysis for Clinical Psychedelic Research

Authors, Publication Year	Treatment Condition	# of Studies Reviewed	Results
Maia et al., 2022	Serious illness	20	Positive effects of treatment especially regarding psychological symptoms
Zeifman et al., 2022	Suicidality	7	Decreased suicidality
Schimmel et al., 2022	Anxiety, depression, and existential distress in terminally ill patients	33	Positive effects of treatment on existential and spiritual well-being, quality of life, acceptance, and reduction of anxiety and depression with few adverse and no serious adverse side effects
Smith et al., 2021	Post-traumatic stress disorder (PTSD)	6 unique, 2 long-term follow-ups	Treatment produced clinically significant reduction in PTSD measure; reductions were sufficient to no longer meet the clinical definition of PTSD
Leger & Unterwald, 2022	Anxiety and depressive disorders	9	Effective treatment producing rapid and sustained improvements

anxiety, depression, palliative care, post-traumatic stress disorder, and other psychological disorders (Center for Psychedelic & Consciousness Research, n.d.; Schneider et al., 2021).

The clinical trials designed over the past two decades have addressed 20th century research concerns with more careful experimental designs and more critical approaches to outcomes (Carhart-Harris & Goodwin, 2017). Table 1 represents the recent systematic reviews and meta-analysis validating the effectiveness of psychedelic-assisted therapies for mental health issues over the last two years.

Now that research has supported the efficacy of psychedelics and entheogens for healing mental illness, further investigations have turned attention to understanding the extent of treatable illnesses and conditions, to what degree they can be treated, and the sustainability of treatment. Several publications make the call for future psychedelic research to focus specifically on the environmental variables and conditions of the treatment (Agin-Liebes et al., 2021; Carhart-Harris et al., 2018; Loizaga-Velder & Verres, 2014; Talin & Sanabria, 2017; Trichter et al., 2009; Tupper & Labate, 2014).

Some research attention has been given to the environmental context, but mostly within the bounds of a psychedelic-assisted therapeutic model consisting of a traditional psychotherapeutic clinical setting. In 2018, Carhart-Harris et al. published a perspective article stressing the importance of context in psychedelic research. Clinical trials are conducted in a classical clinical setting that includes what Carhart-Harris et al. assess as “special attention to context” (2018, p. 2). By this, they mean all subjects undergo extensive psychological preparation before and

after the experiment. According to Carhart-Harris et al., the session environment is prepared to enhance the quality of the experience and their long-term outcomes for the participants.

Conventional mental healthcare centralizes the client-therapist relationship with the therapist serving as an active guide in the healing process (Gorman et al., 2021). Psychedelic-assisted treatments administered in standard psychotherapeutic environments generally have low lighting, specially selected music playlists, and aesthetically pleasing décor that invokes comfort and beauty (Carhart-Harris et al., 2018) with two compassionate mental health professionals who support pre-treatment preparation, treatment administration, and integration post-treatment (Johnson et al., 2008). There is also attention given to building a trusting relationship between the mental health professionals and the subjects (Carhart-Harris et al., 2018).

Research has indicated that the pharmacological mechanisms of psychedelics create “exceptional” environmental sensitivity (Carhart-Harris et al., 2018, p. 1). Therefore, any psychological harm recorded from the treatment sessions may be due to the neglect of the necessary context for success. The researchers contend that their review of the literature has left them with little to assess with respect to the treatment context. The only variables that have been studied are the influence of music (Kaelen et al., 2015), creative imagery, and autobiographical memory scripts (Carhart-Harris et al., 2018). Agin-Liebes et al. (2021), conducted a qualitative study on the integration of psychedelic assisted therapy into a group format using an interpretive phenomenological analysis. Their findings indicated that the group therapy context “may enhance the

effectiveness of trauma processing by reinforcing social cohesion, safety, trust, and belonging” (2021, p. 2).

The current psychedelic context variables that are being studied are limited to the medical model’s clinical setting. Entheogenic rituals are a context that has a much longer global history than the current clinical treatment model. It should not be disregarded as a viable context for mental health healing as well as its other effects. The following sections will cover an exploration of entheogenic ritual context and healing including an overview of the historical use of psychoactive substances in a ritual context and the global evidence of its presence dating back to early humans, an investigation of ritual components and emerging mechanisms, an overview of the current state of the research on entheogenic rituals, and an evaluation of the paradigms of healing from both the clinical context and the ritual context.

PSYCHOACTIVE PLANT USE WITHIN A GLOBAL RITUAL CONTEXT: A HISTORICAL OVERVIEW

Entheogens such as ayahuasca and psilocybin (also known as magic mushrooms), which contain psychoactive substrates, are used to induce profound altered states of consciousness and to promote the expansion of consciousness (Carod-Artal, 2015; Tupper, 2009a, 2009b; Watts, 2013). This author is making a distinction between entheogens as naturally occurring plant-based medicines as opposed to synthetically made psychedelics; although they both have historically been described as hallucinogens or psychedelics in the literature. In both ancient history and in postmodern cases, entheogenic ingestion has been a part of healing and spiritual ceremonies conducted by indigenous communities and more recently by syncretic religions (Burkert, 1985, 1987; Csordas & Lewton, 1998; Eliade, 2020; Lee et al., 2016). Modern use is concentrated in the Amazon where the vine that bears an entheogenic brew called ayahuasca can be found (Blainey, 2015; Fotiou, 2012; Grob et al., 1996; Tupper, 2009a, 2009b). Cultural associations of magic, witchcraft, sorcery, deity and spirit invocation, and mediumship can be a part of these rituals. Participants hold an integrated view of health and spirituality; thus, there is a spiritual explanation for the therapeutic benefits derived from participation in these rituals (F. S. Barrett & Griffiths, 2018; J. C. Barrett et al., 1991; Muraresku, 2020). From this perspective, a mystical experience is a therapeutic one (Carhart-Harris et al., 2018; Griffiths et al., 2006; Richards, 2015). Winkelman’s research (1996, 2001, 2007) also supports the theory that the spiritual encounter is a therapeutic event which causes a profound shift in self-awareness toward a spiritual or sacred domain.

Entheogenic rituals are conducted for many purposes: for diagnosis and healing, for communion with the spirit worlds, for gathering information for practical use, for giving access to spiritual beings to the worldly plane to conduct healing, for its predictive power, for increased self-awareness, to honor nonphysical beings, and to increase one’s connection to nature and the nonphysical reality (Carod-Artal, 2015; Csordas & Lewton, 1998; Eliade, 2020; McGovern, 2009). There is a growing body of evidence of psychoactive drug rituals throughout history (Burkert, 1985, 1987; de Smet, 1985; El-Seedi et al., 2005; Fitzpatrick, 2018; Miller et al., 2019; Samorini, 2019; Stewart, 1987; Wadley, 2016). Table 2 highlights the transcontinental historical evidence from archeological excavation, historical documents, archeochemical and archeobotanical data, anthropologic artistic symbology, excavated objects, and environmental clues. It documents components of the ritual context and some emergent mechanisms at each location when it was reported in the literature, which is further discussed in the following sections.

IDENTIFYING RITUAL COMPONENTS

Ritual components are important variables that need consideration. Table 2 indicates ritual components as identified by the study of historical and recent entheogenic ritual practice. Singing, chanting, music, and dancing in unison are activities common to rituals throughout the world and throughout history (Schwartz 2021). Sacred objects such as chalices, baskets, and altars (Csordas & Lewton, 1998; Morrison, 2003; Muraresku, 2020) in a dedicated sanctuary is also a common attribute (de Polignac 1995). In religious ceremonies, ancient and modern, there is almost always a routine gathering place where rituals and services are performed (Collins, 1990, 2014; Schwartz, 2018). Sacrifices and offerings are other attributes of the ceremonial spiritual context (Csordas & Lewton, 1998; Kerényi & Kerényi, 1991; Muraresku, 2020).

Healing songs (Fotiou 2012), prayers, and intention are considered to be powerful tools to aid in healing. Songs, sometimes referred to as hymns, help to create and maintain sacred space that provides the convergence of the physical and spiritual dimensions. Intention and prayer, usually vocalized in harmony at the beginning of a ritual, have significant value to the ritual practice (Csordas & Lewton, 1998; Schwartz, 2018, 2021). According to Carhart-Harris et al.’s (2018) study on therapeutic factors of psychedelic-assisted therapies, intention was revealed as an important factor of the therapeutic experience in a clinical setting as well.

One of the most common attributes found in ritual studies is a sacrament usually in the form of an ingestible

liquid (Buhner, 1998; Csordas & Lewton, 1998; Gordon Wasson et al., 2008; Muraresku, 2020). These concoctions, sometimes mixed into an alcohol-based medium such as wine or beer, are understood as a power, sacred medicine, a medium for divine contact and healing. In fact, the evidence has had some scholars referring to some ancient communal spiritual activities as prehistoric drug rituals (Burkert, 1985; Kerényi & Kerényi, 1991; Muraresku, 2020). Modern and historical practitioners take the position that the sacrament is imbued with a Divine being or even God him/herself (Goldman, 2010, 2014; Mayerson, 2001; Müller, 1847; Muraresku, 2020; Ruck et al., 1979). The Christian wine sacrament used pervasively throughout the world is considered to be the blood of Jesus Christ, the reported son of God (Muraresku, 2020).

According to Valamoti (2013), the ancient Greeks' detailed accounts of psychoactive sacramental wines for creating an altered state of consciousness to communicate with spirits, deceased ancestors, and God in a ritual setting are numerous. The ancient Greeks also left evidence of the careful preparation that initiates undertook to participate in the rituals of the Greek Mysteries (Muraresku, 2020). The initiation into the spiritual community took place in stages allowing for psychological preparation before the succession of rites. There was a community of elders, who were advanced in practice, who served as mentors to provide support for the novice throughout the induction process. This is synonymous with the Gnostic perception of Jesus serving as a guide on the path to self-discovery. Pagels compares this to the psychotherapeutic approach whereby guidance is given as a provision measure with "the purpose of accepting authority to learn to outgrow it" (Pagels, 1989, p. 126). The ancient Greek practitioners also gave support and preparation for reintegration back into everyday life (Muraresku, 2020). Both the preparation for entry to the ritual and back into the world are shared components found in the clinical psychedelic treatment approach.

IDENTIFYING EMERGENT MECHANISMS OF RITUALS

The ritual process is a complex intervention involving complex dynamics particularly in a healing context. Sturgiss and Clark (2020) suggest that when there is complexity in interventions and processes, there could be a synergistic nature of component variables that equate to more than just the sum of these parts. Clark (2013) defines emergent mechanisms as arising from the synergies of variables which may help to explain outcomes and may contribute to unpredictability often observed in clinical trial outcomes. The theory of emergent mechanisms can be applied to the study of ritual practice outcomes and experiences. In this

case, emergent mechanisms might be best understood as non-physical phenomena such as mental experiences—thoughts, intentions, ideas, insights, mystical experiences, and other phenomena reported by ritual practitioners. Emergent mechanisms will be the broad term used to define the non-physical experiences and activity reported by practitioners in the entheogenic ritual context in this manuscript.

Altered states of consciousness, transcendence, and mystical experiences are some of the most identified emergent mechanisms of rituals and entheogen use (Burkert, 1985; Carod-Artal, 2015; Csordas & Lewton, 1998; Eliade, 2020; Lee et al., 2016; Watts, 2013) (see Table 2). In an altered state, there is a felt sense of transcending space and time reported as a common effect of psychedelic therapy (Richards, 2015). A sense of unity and sacredness of all material life is another commonly reported phenomenon. In the Greek mysteries, initiates of the Dionysian sacrament reported the merging of souls with the other participants, the Divine, and with the life of earth (Euripides & Dodds, 1987). The Greek rituals offered healing, transcendence of the division of humanity and nature, and communion with God (Gordon Wasson et al., 2008).

Another emergent mechanism is a sense of dying before you die, a transformation from mortal to immortal. Records exist documenting this experience by the ancient Greeks and the gnostic Christians (Jebb et al., 1917; Muraresku, 2020; Pagels, 2004; Race, 1997; Richards, 2015). This death may mark the opening to discrete realms of reality, an opening to a gateway of knowledge commonly referred to in the textual accounts of mystical experiences (see Table 2). This knowledge is hidden from the mind in the normal waking state of consciousness. It will be henceforth referred to as non-ordinary knowledge. The discrete realms may also contain the other emergent mechanisms evidenced in entheogenic ritual settings from Table 2—access to the spiritual realms, to Divine beings, to powerful revelations, to guidance and teachings, and to visionary phenomenon (Goldman, 2010, 2014). According to Muraresku (2020), the purpose of the Greek Mysteries was to bring clarity to the presence of their divinity. The entheogenic sacrament gave them access to the knowledge of the spiritual realms (Müller, 1847; Pagels, 2004; Richards, 2015). It gave participants direct contact with the forces that exist in these realms (Burkert, 1985, 1987; Muraresku, 2020; Pagels, 2004; Richards, 2015). Mediumistic experiences, particularly with disincarnate ancestors (Liu et al., 2018) and Divine beings who have healing wisdom and power to share, are also reported experiences (Alverga, 2010; Goldman, 2010; Labate & MacRae, 2016). British scholar Hoyle (Plommer, 1967) finds reports in the Greek tragedies of female worshippers becoming filled with in-

tense rapture, becoming filled with the Spirit, and acquiring powers of divinity. Descriptions of spiritual mediumship (aka possession) during rituals are numerous (Csordas & Lewton, 1998; Goldman, 2010, 2014; Gordon Wasson et al., 2008; Labate & MacRae, 2016; Muraresku, 2020; Ruck, 2016) (see Table 2).

The idea that the sacrament contains a teaching spirit, that when ingested, imparts lessons, knowledge, and wisdom to those who partake is also prevalent (De Rios, 2009; Goldman, 2010, 2014; Muraresku, 2020; Pantoja & da Silva Conceição, 2016). For example, a shaman may ingest ayahuasca to ascertain information on a variety of topics including locating enemies, preparing for hunting or other expeditions, or determining a cause and cure of a disease (Tupper, 2009b). Practitioners emerge from ritual sessions with clear knowledge of lessons, teachings, and powerful revelations relevant to one's personal development and evolution (Goldman, 2010; Gordon Wasson et al., 2008; Labate & MacRae, 2016; Muraresku, 2020). The Greek Mysteries of Eleusis reference the elements of the rituals as things said "legomena", things done "dromena", and things shown "deiknumena" (Muraresku, 2020, p. 42). Visions inspired by entheogens are often the vehicle for accessing the spiritual realm and the knowledge that resides there (Alverga, 2010; Goldman, 2010; Kerényi & Kerényi, 1991; Labate & MacRae, 2016; Muraresku, 2020; Richards, 2015; Wasson, 1957). The ritual practices open those who partake of these forces, providing access to a gateway of knowledge not normally accessible to humans (Goldman, 2010, 2014; Richards, 2015; Tupper & Labate, 2014). The mystical experience has a noetic quality where insights reveal non-ordinary knowledge undiscovered by the discursive intellect providing significant and important illuminations of the depths of truth (James, 2002). All of these emergent mechanisms provide healing on some level of the person's being.

The science of physics can perhaps explain the basis of emergent mechanisms, therefore making it available to empirical study. Thompson (2021) proposes a model of how the non-physical affects the physical. In his model, he acknowledges discrete planes of existence from spiritual purposes to mental, to intentions, to sensorimotor minds, to spiritual bodies, to final causes, and to physical objects. His model mathematically describes three discrete degrees in causal order as Quantum Field Theory, Quantum Mechanics, and Classical Newtonian Physics. His work designed a mathematical mechanistic case for how the nonphysical effects influence, via these three discrete degrees, which then influence protein folding within the cell. Therefore, it is the hypothesis of this work that the ritual context, aided by the ingestion of the entheogen, provides practitioners access to the discrete nonphysical planes

proposed in Thompson's physics model where the emergent mechanisms arise. If this hypothesis is to be tested, we need a new research philosophy and framework that will support the investigation and the applied outcome measures of assessment. This hypothesis will be explored more in depth under the proposed research framework section.

RESEARCH ON MODERN ENTHEOGENIC RITUALS: THE STATE OF THE FIELD

Few studies evaluating the ritual context exist. For those that do exist, there is little consistency in study methodology. Even fewer studies focusing specifically on ritual components and emergent mechanisms could be found by this author, but opportunities for this research to be conducted are present. In the mid-twentieth century, syncretic Spiritist religions that rely on ayahuasca as a sacrament began to emerge (Tupper, 2009a, 2009b). Spiritist religions developed from a fusion of various aspects of religious and spiritual traditions, esoteric mysticism, and indigenous practices. Spiritists' core tenets are immortality of the soul, communication with spirits, and reincarnation (Fernandes, 2008; Kardec, 1858). For example, in the Barquinha religion, entheogenic healing rituals focus on spirit possession and exorcism, whereby church members take on a mediumship role to cast out the malevolent spirits believed to be the cause of patients' illnesses (Araújo, 2006; Frenopoulo, 2008).

The Hoasca Project was a first attempt to study entheogens from a biomedical perspective in its spiritual context in the Brazilian Amazon (Grob et al., 1996). This study collected psychological assessment data from 15 church members of Centro Espirita Beneficente Uniao Do Vegetal (UDV) who had been drinking ayahuasca for more than ten years, and compared the results to a matched control group. Most of the UDV church members had a variety of long-term dysfunctional or risky behaviors accompanied with addiction issues prior to their ceremonial participation. All 15 participants remarked on how their UDV experiences impacted their life paths. Statistically significant results were achieved in the personality integrating concepts (Jung's theory for the process of bringing together the individual and collective unconscious into the personality; it involves coherence and congruence (Jung, 1939), testing variables of novelty seeking ($p = 0.0054$); harm avoidance ($p = 0.011$), as well as cognitive dysfunction measure of word recall ($p = 0.038$) for the treatment group. Interviews from this study found that first-time participants in a ritual uniformly marked a critical experience which represented a profound shift in subjects' daily lives. After joining the church to become regular ceremonial participants, they

TABLE 2. Evidence of Psychoactive Drug Use in a Healing and/or Ritual Setting

Location, Society	Time Period	Evidence	Citations
Neanderthals	9700 BCE	<i>Rituals:</i> Dental calculus from skulls evidences the use of medicinal, if not spiritually motivated, psychoactive plants in early man.	Fitzpatrick, 2018
Americas			
Mesoamerica, Numerous Indigenous Tribes	5000 BCE to current day	<i>Rituals:</i> Entheogenic healing rituals. <i>Ritual Components:</i> Music, chanting singing, various forms of psychoactive substances. <i>Emergent Mechanism:</i> Altered state of consciousness.	Carod-Artal, 2015; Carod-Artal & Vázquez-Cabrera, 2006; de Smet, 1985; Thomason, 2010; Torres et al., 1991
Lopez Altiplano, Bolivia, Indigenous peoples	1000 CE	<i>Rituals:</i> Shamanic paraphernalia in a ritual bundle contains entheogenic compounds.	Miller et al., 2019
Brazil, Amazon, Ayahuasca Religions	1900 CE to Modern day	<i>Rituals:</i> System of rituals using an entheogenic sacrament (also known as Santo Daime) from amazon plants. <i>Ritual Components:</i> Music, dancing, singing of hymns, recitation of prayers, concentration. <i>Emergent Mechanisms:</i> Healing, mediumship, sacred objects, “special understanding of the forces and entities that dwell in the brew (Pantoja & da Silva Conceição, 2016, p. 36),” acknowledgement that the brew is a teacher and a guide, access to other realms, access to knowledge, and personal prophecies. ‘We take Daime to go looking for something fundamental, something that we don’t have knowledge of, something inside our spirit. . . internal knowledge’ . . . “access to depths never before reached. . . takes them back to the Divine” (Pantoja & da Silva Conceição, 2016, p. 36).	Alverga, 2010; Araújo, 2006; Cemin, 2010; Frenopoulo, 2008; Goldman, 2010, 2014; Labate & MacRae, 2016; Pantoja & da Silva Conceição, 2016; Tupper & Labate, 2014
Mexico, Mazatecs	Modern day	<i>Rituals:</i> Rituals using an entheogenic sacrament involving singing and visions.	Pike & Cowan, 1959
Mexico, Aztecs	1600 CE	<i>Rituals:</i> Pagan rituals involving a psychedelic sacrament. <i>Emergent Mechanisms:</i> Healing and access to non-ordinary knowledge. "They consult it like an oracle for everything they want to know, even those things which are beyond human understanding" (de Alarcón, 1984, p. 59).	de Alarcón, 1984
Canada, Iglulik, Inuit	1900s CE	<i>Rituals:</i> Initiation Rite- Ritual of Death and Resurrection. <i>Emergent Mechanisms:</i> Dying before dying, and visions.	Eliade, 2020
Asia			
East Asia, Pamirs & Turpin Basin	800-400 BCE	<i>Rituals:</i> Psychoactive drugs used in complex set of religious practices for medicinal and ritual purposes. <i>Ritual Components:</i> Sacred objects, human sacrifice, musical instruments. <i>Emergent Mechanism:</i> Ancestral contact.	H. Jiang et al., 2016; H.-E. Jiang et al., 2006; Ren et al., 2019
Central Asia, Hindu Kush, Hunsa people	As early as 300 BCE through Modern Day	<i>Rituals:</i> Shamanic use of psychoactive use of Juniper for protection in traditional rites and ceremonies. <i>Ritual Components:</i> Dancing, music, singing, sacrament. <i>Emergent Mechanisms:</i> Healing, altered state of consciousness, supernatural powers and accessing knowledge and prophecies.	Buhner, 1998; Ratsch, 2005; Sidky, 1994



Ancient Indian Texts	1500-1000 BCE	<p><i>Rituals:</i> Soma rituals described in the Rigveda.</p> <p>Soma is a sacramental drink imbued with God residing in a plant. Explicitly characterized as "madira" translated by Watkins as an intoxicant or hallucinogenic. "We have drunk soma and become immortal; we have attained the light, and the gods discovered." Rigveda 8.48.3 translated by Muraresku (2020, p. 66).</p> <p><i>Ritual Components:</i> Sacrament</p> <p><i>Emergent Mechanisms:</i> Dying before you die, access to spiritual realms.</p>	Müller-Ebeling et al., 2003; Muraresku, 2020; Wasson et al., 1971; Watkins, 1978
Middle East			
Israel, Mount Carmel, Raqefet Cave, Natufians	Stone Age	<p><i>Rituals:</i> Ritual feasts.</p> <p><i>Ritual Components:</i> Fermented brews.</p> <p><i>Emergent Mechanisms:</i> Ancestral contact and worship.</p>	Liu et al., 2018
Israel, Galilee, Tel Kabri, Canaanites	1700 BCE	<p><i>Rituals:</i> Psychoactive ingredients found in a storage room next to the ceremonial room at court</p>	Koh et al., 2014
Israel, Tel Kadesh, Phoenicians	2 nd Century BCE	<p><i>Rituals:</i> Organic residue analysis evidenced psychotropic infusions in oil.</p>	Koh et al., 2021
Northern Syria, Nabataeans	Bronze Age	<p><i>Rituals:</i> Marzeah rituals.</p> <p><i>Ritual Components:</i> Music, dance, hallucinogenic sacrament.</p> <p><i>Emergent Mechanisms:</i> Transcending time and space, altered state of consciousness, divine access, spiritual realm access, underworld/ancestors, mystical experiences, otherworldly travel, mediumship.</p>	Del Olmo Lete, 2015; McGovern, 2009
Israel, Tel Arad, Judahite Shrine, Israelites	8 th century BCE	<p><i>Rituals:</i> Archeochemical evidence of the ritual use of drugs cannabis found on the altar of a key shrine.</p> <p>Authors suggest it had a deliberate psychoactive role.</p>	Arie et al., 2020
Egypt, Ancient Egyptians	3150 BCE	<p><i>Rituals:</i> Archeochemical evidence of psychoactive ingredients in wine jars of a coronation ceremony which was "highly suggestive of a ritual involving psychoactive plants" (Patrick E. McGovern, 2009, p. 120).</p> <p><i>Ritual Components:</i> Sacrament.</p> <p><i>Emergent Mechanisms:</i> Access other realms, to cure spiritual blindness(healing) and access to non-ordinary knowledge. "The awesome knowledge of what lies beyond the threshold of death" (Naydler, 2004, p. 234).</p>	McGovern, 2009; Naydler, 2004
Europe			
Europe, Mas Castelar, Spain	5 th century BCE	<p><i>Rituals:</i> Initiation ritual sites evidenced the remains of fungus with psychoactive alkaloids in two different artifacts, in the teeth of a human jawbone, and in the chalices that contained a special brew. Komos symbols (ritualistic nocturnal procession from Greece) were found.</p> <p><i>Ritual Components:</i> Sacrifice, brewing equipment for sacrament, chalices, and an altar.</p> <p><i>Emergent Mechanisms:</i> Divine contact, mediumship, and ancestral contact.</p>	Muraresku, 2020; Pons, 2002; Pons et al., 2016; Tresserras, 2000
Germany, Celtic Tribes	5 th -4 th century BCE	<p><i>Rituals:</i> Discovery of henbane, a psychoactive ingredient and popular beer additive for increasing intoxication was found in malt samples. Consumption was not definitively proven (Stika, 2011).</p> <p>During the medieval ages and Renaissance henbane, which became synonymous with black magic and anthropomorphized as witches, and mutterkorn which causes seizures and hallucinations, were both psychoactive ingredients found within the same region medieval beer described as narcotic, aphrodisiacal, psychotropic and in some cases hallucinogenic.</p>	Bostwick, 2014; Buhner, 1998; Campbell, 2009; Müller-Ebeling et al., 2003; Stika, 2011
Spain, Andorra, Prats	1600 BCE	<p><i>Rituals:</i> Ritual grounds produced archeochemical evidence of beer in ceramic pots, mushrooms wrapped in fern fronds, and jimson weed which contains a number of visionary properties.</p>	Soni et al., 2012; Yáñez et al., 2001

Spain, Tarrojana Calvari d'Amposta	Prehistoric	<i>Rituals:</i> Undisturbed burial cave contained hallucinogenic beer that was consumed during the mortuary ceremonies.	Guerra-Doce, 2015
Spain, Pintia, Necropolis of Las Ruedas, Vacceans	2 nd century BCE	<i>Rituals:</i> Evidence of a special brew with psychedelics during a funeral feast ritual. Investigators called it "psychotropic beer" consumed during a funeral feast with "clear intent" of propelling an otherworldly journey "to the beyond" (Sanz Mínguez et al., 2003, 155, 157, 316) translated by Muraresku (2020, p. 143).	Muraresku, 2020; Sanz Mínguez et al., 2003
Turkey, Gobekli Tepe	Neolithic period	<i>Rituals:</i> Rituals with dancing that might induce an altered state of consciousness. Psychoactive beer perhaps allowing communion with the ancestors (Dietrich et al., 2012). Humanities first ritual beverage to facilitate interaction between living and the dead (Gresky et al., 2017).	Dietrich et al., 2012; Gresky et al., 2017
Greece, Crete Minoans & Mycenaens	16 th century BCE, Bronze age	<i>Rituals:</i> Archeochemical evidence of ritual cocktail in large quantities in a ritual setting.	McGovern, 1999, 2009
Greece, Gordium, Royal Tomb Anatolians	8 th century BCE	<i>Rituals:</i> Archeochemical evidence of psychoactive beer, ritual potion used in afterlife and death rituals.	McGovern et al. 2008, 2017
Italy, Pompeii, Villa Vesuvio	2 nd century CE	<i>Rituals:</i> Roman Refrigerium ritual. <i>Ritual Components:</i> Psychedelic ritual potions, altars. <i>Emergent Mechanisms:</i> To summon the dead back from the grave, access to spiritual realms and the ancestral spirits.	Ciaraldi, 2000; Macmullen, 2010, 2017
Italy, Benevento	Middle Ages	<i>Rituals:</i> Renaissance witches practicing rituals with sacrament infused with psychoactive compounds .	Ginzburg, 2004; Hatsis, 2015
Greece, Eleusis, Phoenicians	1500 BC- 392 CE	<i>Rituals:</i> The Greek Mysteries, famous, well attended underworld contact rituals incorporating a drugged wine offering transformation from mortal to immortal. While archeochemical data has not yet been found, textual accounts of a psychedelic sacrament, Kukeon, has been found in numerous texts. Initiates of the rites earned the title Epoptes which translates to "the one who has seen it all" (Muraresku, 2020, p. 27). Plato described his experiences of the ritual elixir, Kukeon, while participating in The Mysteries as having "blessed sight and vision" (Muraresku, 2020, p. 127). <i>Ritual Component:</i> Sacrament. <i>Emergent Mechanisms:</i> Access to non-ordinary knowledge, visions, dying before you die.	(Bowden, 2010; Burkert, 1985; Gordon Wasson et al., 2008; Harissis, 2014; Kerényi & Kerényi, 1991; Muraresku, 2020; Mylonas, 1933; Ruck, 2016; Valamoti, 2013
Italy, Magna Graecia, Phoenicians	600-400 BCE	<i>Rituals:</i> Mystics were quoted having transcended space and time to contact the deceased ancestors in the underworld.	Kingsley, 1999
European, Christian Gnostics	3 rd century CE	<i>Rituals:</i> In the Marcasian rituals, female Gnostics used a drugged wine in the early third century CE described by Hippolytus as a pharmakon.. <i>Rituals Components:</i> Prayer, sacred objects, invoking the calling of the God Charice (the one who transcends all knowledge and speech). Gnostic is derived from gnosis Greek translation "knowledge." Gnostics used the term to mean "insight" involving an intuitive process of knowing oneself. <i>Emergent Mechanisms:</i> Prophecies, self-knowledge, and mediumship .	Hippolytus, 2014; Muraresku, 2020; Pagels, 1989; Saint Irenaeus (Bishop of Lyon), 1857

reported that they experienced improvements in memory and concentration, persistent positive mood states, fulfillment in day-to-day interactions, an increased sense of purpose, and increased meaning and coherence in their lives. In this study, researchers noted it was not possible to determine how much of these changes can be attributed to the entheogen itself as opposed to the ceremonial and community context. They suggest future research be focused on ceremonial structure and safeguards. Other

studies on subjects of entheogenic rituals were focused on risk assessment (Doering-Silveira et al., 2005; Fábregas et al., 2010; Gable, 2007; Halpern et al., 2008), pharmacological mechanisms, biochemical theory, therapeutic effects (Brierley & Davidson, 2012; Halpern et al., 2008; Liester & Prickett, 2012; Thomas et al., 2013), and ethnographic understanding of healing and ritual culture (Calabrese, 2013; Labate & MacRae, 2016).

Trichter et al. (2009) conducted another mixed-meth-

ods study of ayahuasca drinkers in a ceremonial setting. Their research concluded that participants had positive spiritual experiences during and after the ceremonies. Emergent mechanisms can be identified in the participants' reports of this study indicating access to non-ordinary knowledge including: insights and revelations into the physical, psychological, emotional, and spiritual health of the participants; and a sense of unity with nature, humanity, and the Divine. Psychological measures showed that ritual experiences were integrated into the participants' daily lives and manifested as increased empathy; increased feelings of gratitude and peace; and an increased sense of responsibility for themselves, others, and the world. However, the researchers did not publish their numerical data for review in this article making it difficult to evaluate the claims. The researchers encourage further investigation into the value of the spiritual setting for ayahuasca benefits to explore whether psychedelic medicine and entheogenic healing has different outcomes in different contexts.

There are study findings that suggest a relationship between ritual effects and collective awareness and collective experiences. In 2017, Talin and Sanabria published an ethnographic study on the ritual use of ayahuasca to heal addiction. They concluded ritual context providing a cohesive community for a sense of belongingness and caregiving to the addicts is a factor that is necessary for sustained treatment outcomes. This concurs with Agin-Leibes et al.'s (2021) study findings for a group therapy format. Winkelman's (2001) work also found the following outcomes to the ritual context: enhanced social solidarity, improved interpersonal and community relations, and strengthened social identity and group cohesion. Understanding how the ritual components and emergent mechanisms may create a collective phenomenon is an area ripe for research. This will be further explored in the discussion section with a provided framework on a possible way to situate this study.

Loizaga-Velder and Verres conducted a qualitative empirical analysis exploring ayahuasca rituals that affirm the findings of entheogens as a substance-dependence treatment in a "carefully structured setting" (2014, p. 63). The authors determined that both set (preparation and intake) and setting (the quality of containment, guidance of the experience, and appropriateness of the therapeutic framework) are all variables that affect outcomes particularly as it relates to the influence of an altered state of consciousness. They also conclude that integration of the experience and implementation of insight is correlated with enduring behavioral change.

CONFLICTING PARADIGMS OF HEALING

Healing is the emergent mechanism common to both

psychedelic-assisted therapies and modern entheogenic rituals. Healing is also a significant motivation for ancestral reliance (Gordon Wasson et al., 2008; Muraresku, 2020; Piper, 2013; Ruck et al., 1979; Rush, 2013; Valamoti, 2013), for newcomers (Leger & Unterwald, 2022; Maia et al., 2022; Schimmel et al., 2022; Smith et al., 2021; M. J. Winkelman, 2007; Zeifman et al., 2022), and for continued modern entheogenic ritual practitioners to seek out the therapy in either context (Alverga, 2010; Fotiou, 2012; Frenopoulo, 2008; Goldman, 2010; Goulart, 2011; Labate et al., 2010). The scientific investigation on the healing effects of both contexts has centered on the clinical psychological and social outcomes of entheogen/psychedelic use. Additionally, as cited throughout the Identifying Emergent Mechanisms of Rituals section, there are significant reports of healing effects embedded in the emergent mechanistic experiences. Altered states of consciousness, mystical experiences, transcendence, revelations, Divine guidance, non-ordinary knowledge, visions, contact with healing beings, and mediumship all share a relationship to the healing experience (Alverga, 2010; Goldman, 2010, 2014; Gordon Wasson et al., 2008; Labate & MacRae, 2016; Liu et al., 2018) (see also healing references and citations in Table 2). In fact, the healing experience is attributed to the ritual in its entirety not only to the partaking of the entheogen alone. To understand this attribution, one must first understand the paradigm of healing that entheogenic practitioners operationalize.

The ideal environment for studying the entheogenic ritual healing paradigm is within the Ayahuasca traditions where ritual healing with a sacrament is the center of the practice. In fact, based on her research, Goulart (2011) describes the Santo Daime as a healing cult due to the origins of entire ceremonies being dedicated to healing. The religion of Santo Daime attributes the healing intervention to both the plant and the spiritual experience produced within the ritual referred to as "works" in this doctrine (Alverga, 2010; Goldman, 2010, 2014; Labate & MacRae, 2016). Goulart's work investigates both the theological perspective of healing in the Santo Daime doctrine and its specific manifestations within the rituals. However, there is little peer-reviewed evidence published with an English translation focusing on elucidating the spiritual healing paradigm in modern entheogenic ritual context. This is problematic for research study design. Current ritual research cited under the Research on Modern Entheogenic Rituals section of this paper are based on the medical model of psychological healing rather than the healing paradigm held by the practitioners themselves. Therefore, there is an inherent bias preferencing the clinical medical paradigm of healing in the research design from the outset. Some work has been done to compare psychological medical healing and

spiritual ritual healing (Hultkrantz, 1992; Thomason, 2010). More investigation needs to be done to elucidate the spiritual paradigm of healing specific to entheogenic rituals according to the views of the practitioners so research philosophy and design can account for any differences affecting analysis and interpretation.

Due to the small amount of evidence for interpreting entheogenic healing philosophy, this researcher has conducted some investigation into the Ayahauscan Religion Santo Daime using four secondary sources (Alverga, 2010; Goldman, 2010, 2014; Labate & MacRae, 2016) and one primary source (J. Goldman, personal communication, February 16, 2020). None of these source publications have been peer-reviewed. Theological and anthropological study and Santo Daime practitioner interpretations reveal an assumption of a healing capacity which inherently exists in all life (Alverga, 2010; Goldman, 2010, 2014; Labate & MacRae, 2016). This serves as the foundation for the entheogenic ritual healing paradigm. There is an appeal to a stronger force or Divine being that can be resourced to increase this inherent capacity for wholeness, health, and well-being. In this context, the sacramental brew is but one aspect of the ritual that exists to invite and support healing. The entire ceremonial process is designed to create a synergistic experience giving access to the emergent mechanisms that is more than just the mere sum of its parts and results in healing on many levels of individuals' existence.

An interview conducted by this author on the experiences and interpretations of a Santo Daime elder, ceremonial leader and teacher, and healing medium (Goldman, 2010, 2014) reveals the doctrinal understanding of healing from his perspective. Jonathan Goldman founded the first Santo Daime church established outside of the home country of Brazil, and the first entheogenic church in the United States. He was the principal plaintiff in the successful court case against the federal government that resulted in the legalization of the ceremonial religious use of an entheogenic sacrament in 2009. Goldman, who began drinking the Daime sacrament in 1988 and leading ceremonies in 1993 (Goldman, 2010), has since spent three decades studying the Santo Daime doctrine and spiritual practices. The comments below testify to his account of the religious teachings and practices as it relates to healing and entheogenic ritual use. With respect to human healing:

Healing is accomplished with the arrival of the inner state of all the levels of a person being in a harmonious working relationship. [He identifies these levels as etheric, emotional, mental, and spiritual.] This occurs through a profound process guided by the intention to put the heart in vibrational charge of the establishment and mainte-

nance of that harmony, and placing the spiritual aspect of the person's being as the overseer of the mental and emotional aspects. In this way, the whole human body with all its layers is consciously linked to the inherent harmony of nature. This is authentic healing. All healing modalities can fit into this paradigm. (J. Goldman, personal communication, February 26, 2020)

On the sacrament and the importance of the ceremonial context, Goldman responds:

Since human beings are fundamentally spiritual entities bound in a temporary human case—when layers of consciousness are opened by psychoactive substances, the inherent spiritual nature will make itself known regardless of the setting. However, a setting that acknowledges this true nature will make the unfolding of the spiritual self smoother, more complete, and long lasting. (J. Goldman, personal communication, February 26, 2020).

With respect to studying entheogens out of their ceremonial setting:

It is understandable that those seeking to legitimize the use of these most helpful substances will try to limit their inquiries and therapies to the more widely accepted parameters of belief. However, this does not change the truth of spiritual reality, nor the necessity of addressing it and including it if real healing is to be facilitated. (J. Goldman, personal communication, February 16, 2020)

Winkelman (2007) implies a similar definition of healing promoted by psychedelic therapy when he refers to it as a psychointegrator. Psychointegrators stimulate "emotional and mental processes through the use of a physiological dynamic that forces the organism towards an integrative holistic growth state in the integration of soul, mind, and spirit for growth and development" (Winkelman, 2007, p. 7). In 2012, Fotiou published his ethnographic work on contemporary ayahuasca ritual healing. Fotiou's findings concur with Winkelman and Goldman's definition of healing as an integral process that involves all three dimensions of our being—physical, psychological, and spiritual. Illness is viewed by the ritual participants to be a sign of psycho-physiological imbalance caused by spiritual, animistic, or social forces. In this study, Fotiou discovered Westerners are drawn to the rituals because, according to them,

there is an added understanding of the spiritual dimension of healing combined with the physical aspect atypical of Western medical and psychological approaches. In the spiritual view of healing, a crisis is involved that precipitates the healing process, requiring the experiencer to take responsibility for initiating and collaborating in a healing process that uniquely fits that individual (Bragdon, 1990). The healing that occurs must involve all levels of the human—mind, body, and spirit. This understanding of healing has served as a core principle of Eastern healing practices such as acupuncture, shamanic healing, Tai Chi, Qigong, and Yoga for thousands of years (Levin, 2008; Moodley & West, 2005).

To investigate the effects of healing in both clinical and ritual contexts, it is important to consider how the psychological and allopathic scientific community perceives healing within a clinical context in contrast with the entheogenic ceremonial practitioners' paradigm. The Santo Daime's theological view of healing and the spiritual understanding of healing cited above is outside of the current medical model's framework for explaining the human body, health, and healing.

In the clinical medical perspective, the healing paradigm involves a symptom, diagnosis, and treatment model—a series of causally related events. It is generally focused on either the body or the psyche in isolation from each other, except in the case of a drug intervention for mental health diagnosis. In this context, illness is believed to be caused by external conditions. Additionally, treatment generally must come by applying an outside intervention. This understanding of healing is ubiquitous not only in Western medicine but it is the predominant understanding of healing in Western culture that has had global effects with the spread of Western medical aid and intervention (Ibeneme et al., 2017).

The allopathic understanding of psychedelics as a therapeutic intervention is based on neural mechanistic theories and the interactions of psychedelic chemical compounds. This perspective forms the basis of clinical investigations and the proposed models for explaining how and why psychedelic-assisted therapies are effective as treatments (Herzog et al., 2020). These models propose that psychedelic treatment facilitates interactions among mechanisms and functions of the brain which affects processes related to behaviors, emotions, attachments, and memories. Winkelman (1996, 2001, 2007) and Galimore (2015) identified psychedelics as having a psychointegrative function with neurological effects that produce an integration of various psychophysiological processes, a biologically driven psycho-integration.

The medicinal perspective of psychedelic healing nature is reduced to its molecular constituents impacting an

individual's neural biochemical structures. This contrasts significantly with the medicinal entheogenic view of the sacrament containing a Divine intelligence derived from the plant who imparts knowledge and healing (Goldman, 2010, 2014; Mayerson, 2001; Müller, 1847; Muraresku, 2020; Ruck et al., 1979). From the perspective of the communities who use ayahuasca in their spiritual practices, the brew has diagnostic and curative attributes that are given by supernatural forces rather than by the chemical constituents (Alverga, 2010; Goldman, 2010, 2014; Tupper, 2009a, 2009b; Tupper & Labate, 2014).

In the spiritual context, healing is attributed to more than a linear relationship of diagnosis and treatment delivered through a physical medium such as a drug. There is an acknowledgement of the interconnected aspect of the mind, body, and spirit where healing effects occur in all three aspects of a person. Studies show that mystical experiences in the transcendent, altered state of consciousness are fundamental to healing outcomes as they correlate with enduring positive changes in psychological functioning and in prosocial behaviors (Barsuglia et al. 2018; Griffiths et al. 2006, 2016). In a ritual context, entheogen practitioners see the spiritual encounter facilitated by the entheogen in the ritual context as a therapeutic event (Alverga, 2010; Goldman, 2010, 2014; Labate & MacRae, 2016; Tupper & Labate, 2014; Winkelman, 2001, 2007). According to Bossis, a psychedelic researcher at New York University, "the whole point of . . . psilocybin interventions is to trigger the same beatific vision that was reported in the Greek Mysteries for millennia" (Well, 2018). In fact, the data shows that the more robust the mystical experience, the greater the magnitude of clinical change (Barrett & Griffiths, 2018).

In the medical repurposing of clinical psychedelic-assisted research, cultural bias preferencing the medical model's paradigms of health and healing also needs to be examined. Studying philosophy and design with embedded cultural bias might be preventing the realization of valuable discoveries of emergent mechanisms, their role in healing, and the role of consciousness in healing overall accounted for by practitioners in the ritual context. For example, while reviewing the literature, this author found on more than one occasion, researchers referring to the reports of emergent mechanistic experiences of those who practice entheogenic ritual healing as beliefs such as "ayahuasca visions are believed to allow communications with the spiritual realm" (Tupper, 2009a, p. 277). By contrast, whenever scientific ideas were conveyed, they were never framed as beliefs. This reflects Western cultural bias for the authority of scientific discovery while reducing subjective experiences and non-ordinary knowledge as mere belief. Tupper (2009a) uses the term belief/believe to refer to spiritual

practitioners' experiences six times but not once when referring to scientific ideas. Winkelman's (2007) article also describes belief a total of six times when discussing spiritual understanding but never for scientific claims.

Fotiou's (2012) findings reveal that the denial of the spiritual role for understanding health and healing as a cause for Westerner's seeking out foreign contexts, where the role of consciousness in healing is not only recognized but in the forefront. This is an important consideration for Western healthcare researchers and professionals to heed for the future. Contrasting the two paradigms makes clear the need for a new framework of investigation if the healing effects of entheogenic rituals are to be adequately investigated free from cultural bias. The following sections will provide some suggestions for a philosophical shift in research approach. It will introduce a framework for supporting the proposed alternative philosophical approach to support both empirical and subjective study designs.

ADVANCING THE PSYCHEDELIC RESEARCH THROUGH THE RITUAL CONTEXT

The chosen research philosophy and the accompanying research framework that form the basis of psychedelic/entheogen field of study must be sufficient to contain the varied and complex, multidimensional phenomena that occurs within a ritual context. This is vital to the development of the research approach and design and thus the success of the findings with respect to mechanisms, variable relationships, and outcomes. The research philosophy provides the groundwork while the framework provides the structure for investigation. Both the research philosophy and the framework must be expansive enough to include the nonphysical aspects of the entheogen ritual context and the synergist components and emergent mechanisms.

CONSIDERATIONS FOR RESEARCH PHILOSOPHY

Entheogenic rituals is one of the possibilities for examining context within the psychedelic-assisted therapy research. While there are many directions entheogenic ritual research could take, to date the only one examined, in a limited manner, is the healing effects according to the Western medical model healing paradigm. Future directions should include examination of the healing paradigm as understood by the ritual practitioners followed by studies examining healing effects according to this alternative healing paradigm. Future research should also focus on the emergent mechanisms produced in the ritual environment. This focus could also be extended to the relationship between ritual components and emergent

mechanisms. New hypotheses would likely emerge from these investigations that would lead to new or more detailed study directions.

To address these proposed research directions, a new research philosophy is needed. All clinical psychedelic research currently being conducted has been designed according to a positivism worldview (Bonell et al., 2018). Positivism is the empirical method of knowledge acquisition used for validating theory (Creswell & Creswell, 2017). In most cases, it is based on data collected solely through the five senses. It is deterministic and reductionistic in that it attempts to separate phenomena into distinct parts to quantitatively determine a cause-and-effect relationship. Relying on experimental design methodology to elucidate antecedent conditions, positivistic approaches are found ubiquitously in the medical research model of quantification, controls, variables, symptom identification, diagnosis, and treatment of illness efficacy measures carrying the assumption that this leads to healing (Creswell & Creswell, 2017; Radin, 2018). Positivism aligns with the medical model assumption of the linear relationship of symptom, diagnosis, and treatment that leads to healing. A positivistic worldview assumes a different paradigm of health and healing from the one of practitioners who use entheogens for spiritual awakening and integrative healing purposes (Tupper & Labate, 2014). Therefore, relying on positivism research methods may not be the solution to a complete understanding of entheogens as agents of healing, the role of emergent mechanisms, and the synergistic relationships created among all the ritual activity. The call to attention on research context within the psychedelic-assisted therapy research represents an opportunity for the scientific community to consider if its study would benefit from a more expansive perspective than the philosophical worldview of positivism underpinning clinical trial research.

The hypothesis of this manuscript is that the components of the ritual context including the ingested entheogen give participants access to discrete planes of reality where the emergent mechanisms become accessible. These discrete planes may be a container for non-ordinary knowledge, insights, access to Divine Beings, and other emergent mechanisms reported throughout the literature cited in Table 2. A positivism approach would require a stripping away of the ceremonial elements as controlled variables in search of the mechanistic, linear, cause-and-effect relationship between each component and healing outcomes. If emergent mechanisms arise from the synergies of the component variables working in tandem as Clark suggests (2013), they would be eliminated in the controlled clinical context from the observational environment preventing researchers from understanding the full

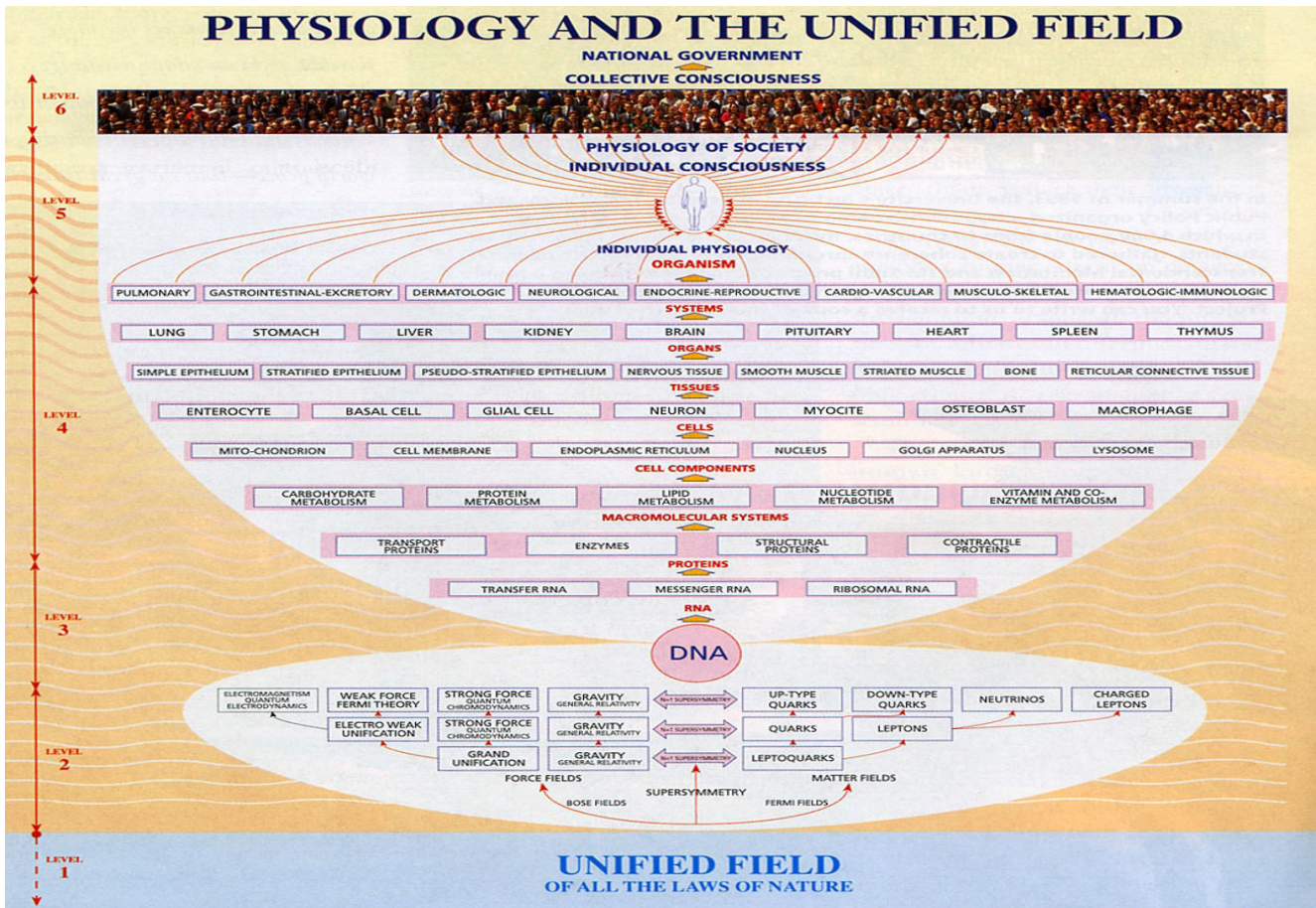


Figure 1. Physiology and the Unified Field. (Copyright, all rights reserved, Maharishi International University, 2021)

effects of the ritual environment on healing as well as other corollary effects provided by the experiences.

The emergent mechanism concept of non-ordinary knowledge is based on a special type of knowing that Plato called gnosis (Radin, 2018). The knowledge one gains through gnosis is distinct from intellectual or rational knowing applied in positivistic methodology. It is its own specific state of consciousness. This notion of noetic understanding contrasts significantly with scientific ideology and its understanding of empirical methods of knowledge acquisition. Therefore, a science based only on positivism may be distorting an understanding of human nature and the nature of reality (Tupper & Labate, 2014). Radin's research suggests that by focusing the scientific method "inward and exploring what consciousness is capable of" we can "find whole new realms of knowledge" (2018, p. 2). Radin describes this space as "the psychophysical nature of reality . . . mysterious interstitial space shimmering between mind and matter" (2018, p. 3). It is beyond the experiences drawn from the five base senses of normal waking consciousness. It is this non-ordinary knowledge that is perhaps contained in the discrete planes of the nonphysical

described by Thompson (2021). This is what both ritual practitioners and spiritual mystics have described throughout history. If this hypothesis is to be tested, scientists need a research methodology that would be expansive and inclusive enough to include mixed-method students with positivist approaches providing adequate space for investigating the possibility of the nonphysical plane and the experiences it may contain. Two alternative research philosophies for incorporating mixed methods study designs are critical realism and the pragmatic worldviews.

A critical realist worldview takes the position that reality can never fully be known and measured (Sturgiss & Clark, 2020). In this theory, perceptions of reality are seen as distinct from a reality that exists beyond our subjective perceptions (Radin, 2018). Applied to research, this philosophy aims to answer research questions beyond reductionistic causality, examining how and why complex interventions and programs work. In fact, Bonell et al. (2018) concluded that the most suitable paradigm for studying social interventions is realism.

Similar to the critical realist philosophy, a pragmatic worldview assumes that a researcher's perceptions of re-

ality are not synonymous with the totality of reality (Creswell & Creswell, 2018). However, this perspective does not distinguish between a subjective and objective reality as the critical realist assumes a truth that continuously manifests from the context, constituents, and the motion thereof. Pragmatists are concerned with application, consequences of actions, and solutions (Cherryholmes, 1992; Creswell & Creswell, 2017; Patton, 1990).

Both critical realists and pragmatists are proponents of using mixed methods study designs. This shift would move researchers away from foundational cause-and-effect and reductionistic-oriented assumptions thereby avoiding scientific bias resulting from positivist scientific theory that blinds the researcher to emergent variables so obvious to entheogenic ritual practitioners and clinical psychedelic experiences. Critical realists and pragmatic research philosophy are both well suited for examining context (Carhart-Harris et al., 2022; Young, 2022) because the researcher is free to choose the methods, techniques, and procedures that best meet the needs and purpose of the research question rather than subscribing to only one method such as clinical trials. It provides a platform for utilizing mixed methods research to access varied forms of data collection and analysis providing a more comprehensive examination of what could be occurring in any given phenomenon.

THE RESEARCH FRAMEWORK: THE UNIFIED FIELD

A new research philosophy is necessary, but it is not enough to address the complex nature of entheogenic research for studying the healing paradigm, activity, experiences, relationships, and outcomes. A model is needed that would include the discrete levels of reality from the nonphysical to the physical, providing a basis for how to examine them in a ritual context. The Physiology and Unified Field Chart (Figure 1) provides a framework for analyzing and interpreting the multidimensional levels that are interrelating within the ritual context.

Figure 1 is based on the unified field of natural law derived from the quantum field theory. According to Nader et al. (2001), the unified field theory has mathematically evidenced that the four primary force states naturally progress toward unification into one single quantum field also known as the Unified Field of Superstring Theory. The unified field contains additional types of fields, or as Thompson (2021) terms them: discrete planes, such as long-range force fields, very light superconducting cosmic strings, and magnetic monopoles (Nader et al., 2001). Figure 1 includes multiple levels of reality from the unified field to the non-physical quantum to the physical levels. It is a mapping of

how the various discrete levels of human and collective physiology relate to one another throughout these levels. It is a representation of the Unified Field of Natural Law characterized by infinite correlations and serving as the basis of all relationships in the universe (Nader, 2021); therefore it is comprehensive enough to examine the complex nature of ritual dynamics, mechanisms, and outcomes.

The first level, depicted as the unified field, mathematically evidenced and described in quantum physics has also been described in the consciousness philosophy literature. Reports of a nonphysical, intelligent dimension were showing up in physics theory as early as the late 1800s and taking root in the 20th century. Stewart describes it as a “Living intelligent universe . . . the production of the visible universe brought about by an intelligent agency residing in the unseen” (Stewart, 1878). Quantum physics refers to it as the Unified Field of Superstring Theory (Ellis, 1986; Nader, 1995, 2001, 2021; Nidich et al., 2001; Schwarz, 1985). The unified field is hypothesized as the field of universal or nonlocal consciousness (Nader, 2021). Scientific philosopher and systems theorist Ervin Laszlo referred to the unified field as “Quantum Consciousness” or “Quantum Mind” in his theories (Laszlo, 2007, 2009, 2014). He proposed that the activity of quantum mechanics and superposition may be the foundation for explaining consciousness. His theory of the A-field (Akashic field) is described as a “pre-space based on the quantum vacuum containing fluctuations; the information carrying plane” (2007, pp. 68–69).

Theology, theosophy, and early philosophers also made contributions to the study of this intelligent, non-physical dimension. The akashic record is a “concept describing a space that contains information about everything in existence since the dawn of time; a place in which all matter sprang which has an archival function for the universe, holding knowledge of the past, present and future (Nash, 2020, p. 110). Akasha, in the context of a location, comes from the Sanskrit word, Akasa which is translated as “space, atmosphere, or sky” (Pokazanyeva, 2016, pp. 325–326). This term has similar meanings in the branches of Vedic and Buddhist traditions (Nash, 2020). In Vedic understanding, Akasa is one of the two materials that make up the known universe, the space containing all matter and motion, the infinite void. In Buddhism, versions of Akasa incorporate meanings of space element which indicates boundary of matter, endless empty space that has no place in objective reality, the unconditioned or uncreated states. In Western theosophical study, aether was the term similar to Akasa (Nash, 2020). Introduced originally by Aristotle and reintroduced by Rene Descartes in the 17th century (Gaukroger, 1998), aether was seen as a valid explanation in physics as the intervening substance for the classical Newtonian forces (Barrett & Griffiths, 2018).

Akasha as a formal term came up in Blavatsky's work described as the source of all existence. "... the One Element. . . . Space, Akasha, Astral Light - the Root of Life" (Blavatsky, 1888, p. 314).

According to Nash's theological, Indian philosophical, and theosophical synthesis of the study of the unified field, those who gain access to the Akashic records could attain absolute knowledge beyond the normal waking state of consciousness. The field is related to the concepts of omniscience, parallel dimensions, and predestination (2020). These descriptions match descriptions given by entheogenic practitioners as identified in Table 2. The subjective and objective evidence of humans accessing the discrete, nonphysical planes of existence containing healing and non-ordinary knowledge is prevalent enough in numerous disciplines to warrant increased attention in a wider, more comprehensive scope of investigation.

Level 2 of Figure 1 depicts both the quantum and classical fields of physics. The quantum field is also known as the unmanifest field of intelligence (Nader, 1995, 2001; Nidich et al., 2001). Thompson's proposed mathematical model of three discrete degrees in causal order: Quantum field theory---->Quantum Mechanics---->Classical Newtonian Physics (2021) can be found in level 1 and level 2 of Figure 1. Thompson lays out a mechanistic case for how the nonphysical effects influence via the Quantum field (level 1) which then affects protein folding (level 3) via the quantum mechanical plane (level 2). Non-physical forces (level 2 forces) are described by Thompson as mental phenomena such as intentions, thoughts, ideas, spiritual phenomena. Thompson highlights the discrete planes of existence in ordered lists containing emergent mechanisms within level 2—spiritual purposes, mental, intentions, sensorimotor minds, spiritual bodies, final causes, and physical objects. Thompson's proposal assumes a prediction that non-physical influences in living cells are the directors of protein folding arrangements affecting speed and location; however, the exact force that directs this remains unidentified within the field of biophysics.

The ritual components of attention and intention (level 2) are described as essential in opening to the emergent mechanisms by several researchers, although various synonymous terms are being applied. Radin speaks of the significance of attention and intention in terms of psi abilities and magic, which he has categorized as "mental influence of the physical world, perception of events distant in space and time, and interactions with nonphysical entities" (2018, p. 1). These categories of emergent mechanisms correlate with Thompson's mathematical model for describing how the nonphysical influences the physical.

In Schwartz's (2018) studies on psi ability, cathedrals were found to be more easily and clearly viewed by remote

viewers (the ability to sense distant or unseen targets purportedly through the mind) than a basic warehouse of the same size and shape. He attributes this finding to the effects of a group of people holding intentional focused awareness (level 2 emergent mechanism) in an emotionally charged state. Rituals and emotional arousal share a relationship (Schwartz, 2018; Summers-Effler, 2006). Emotions which become attached to the symbols in the dedicated space led to increased bonding among participants (Summers-Effler, 2006). Cohesively, shared emotional states may play a mechanistic role in the remote viewing ability. The central nervous system's limbic system is the biological system related to the regulation and expression of emotional states. This system is represented by level 4 in Figure 1 (Unified Field).

Hartelius et al. (2022) published an electroencephalogram study which confirms that patterns of neural activity correlate with positive emotional states and voluntary control of attention. Their study confirms the theory of an operational cognitive process under voluntary control known as a somatic seat of attention and its relationship to emotional states. Collin's research (1990, 2014) agrees that emotions play a significant role in ritual effects. Additional contributing factors include focused, unified, rhythmic actions (Schwartz, 2018; Summers-Effler, 2006). When this data is analyzed collectively, level 5 emerges as the intersection of individual and societal physiology. Level 5 may serve as an understanding for the collective dynamics accounted for in the studies on entheogenic rituals revealing the qualitative experiences of enhanced group cohesion, belonging, solidarity, improved interpersonal relations and strengthened social bonds (Agin-Liebes et al., 2021; Talin & Sanabria, 2017; Winkelman, 2001). Ritual participants' actions serve to strengthen brain entrainment among the group which in turn creates strengthened collective intention which could also be seen in terms of level 6—Collective Consciousness in Figure 1. Brain entrainment (level 5) creates a coherence of intentional awareness and causes synchronization of brain waves (level 2) (Schwartz, 2018). Schwartz (2018) claims that it does not matter what the ritual is, all that is required is that the ritual allows you to attain and sustain intentional, focused awareness. According to Schwartz, intentional observation may also produce an effect in the informational architecture in nonlocal consciousness (level 1) that is represented by the physical presence of that designated sacred place. He explains that we are beings of consciousness and that most of the time our minds are overwhelmed by the sensorial input and the resulting mental noise (level 2) produced by it. This sensorial overwhelm causes our brain functioning (level 4) to be hyperactive. He states that ritual practice, much like meditation, is the key for calming this mental hyperactivi-

ty and the overall physiology in order to create intentional focused awareness.

This author's hypothesis is that the ritual along with its ritual components are key to accessing the nonphysical levels 1 and 2, giving rise to the emergent mechanisms. The evidence in Table 2 suggests that our ancient and modern ancestors, modern tribal societies, and the Spiritist traditions perhaps understood this and relied on the entheogenic plants in a ritual context to provide access to the emergent mechanisms of healing and knowledge. Across disparate time periods and regions of the world, entheogenic ritual practitioners, who would have likely had no physical contact with each other, used psychoactive substances, shared many ritual components, and reported synonymous emergent mechanisms. This would not have been possible with the current scientific belief that knowledge acquisition occurs through cognitive processing based only on the five basic senses. One possible explanation is that the emergent mechanism of non-ordinary knowledge transfer via level 1 and 2 was at play within the ritual. This question warrants deeper investigation into what non-ordinary knowledge the ritual context may provide. If this non-ordinary knowledge is contained in level 1 and 2 of the unified field, then studying rituals with their components may help us understand the emergent mechanisms and gain access to new non-ordinary knowledge reported by ritual practitioners.

If the ceremonial elements work in tandem to create the potential for some ritual participants to have conscious emergent mechanistic experiences such as healing, access to disincarnate beings, and non-ordinary knowledge through the discrete nonphysical planes (level 1 and 2), studies could be designed to test this hypothesis using Figure 1 as a framework for both subjective and objective outcome measures targeting activity on multiple physiological levels. Research has shown that psychedelics induce amplified sensitivity to the environment (Carhart-Harris et al., 2018); this increased sensitivity may strengthen the possibility of access to the emergent mechanisms held in the discrete planes of the nonphysical realms. If it is also true that various physiological levels are working together to create the therapeutic and exceptional human experiences accounted for by entheogenic practitioners in the Identifying Emergent Mechanisms of Rituals Section section, Figure 1 provides a road map for study designs targeting the various physiological levels for mechanistic changes that correlate with specific emergent mechanisms. Correlation studies among the levels could also be incorporated to infer relationships among dependent variables in the ritual context. Additionally, studies are needed to compare the clinical context with ritual context for emergent mechanism outcome variation and similarities.

This framework also provides an explanation for how the two paradigms of healing (clinical medical model versus entheogenic ritual perspective) represent different aspects of the same whole. Both the medicinal concepts of neurochemical (level 3) impact on the neurophysiology (level 4) can be regarded as true as much as the Divine intelligence contained in the medicine (levels 1 & 2). This framework may reconcile any existing conflicts between the two healing paradigms. It provides a physiological explanation for the evidence found in the studies demonstrating correlations between emergent mechanisms experienced in the transcendent, altered state of consciousness, healing outcomes, and enduring positive changes in psychological functioning and in prosocial behaviors (Barsuglia et al. 2018; Griffiths et al. 2006, 2016).

CONCLUSION

This manuscript has covered a historical overview of entheogenic/psychedelic practice. It has examined the therapeutic use of psychedelics from the biomedical understanding of diagnosis and treatment found in medical science and from the ancient view of the ritual context with spiritual explanations of the therapeutic experience. The paper has reviewed several explicit and implicit ritual attributes that may play a role in the healing process. It has introduced the notion of synergistic interconnection, which the author has termed emergent mechanisms, that are part of the ritual attributes, suggesting they may play an essential role in creating access to non-ordinary knowledge and the healing experience. Finally, it has introduced considerations for alternative research design philosophy, a research framework, and identification of potential bias for study within the ritual context.

If nonphysical discrete planes exist in such a way human can consciously contact them thereby gaining access to the reported emergent mechanisms, the body of work presented here, drawn from classical philosophy, physics, history, theology, archeology, biomedicine, psychology, parapsychology, sociology, anthropology, and first-hand practitioner accounts, serves as an integrative review synthesizing evidence and theories that are relevant to this manuscript's central hypothesis. Ancient ancestors, tribal communities, and Spiritist traditions have used and continue to use entheogenic rituals to support their healing, personal development, and awareness. Rituals and their component parts may be the container for the emergent mechanisms of divine or spiritual entity contact; therapeutic/healing experiences; mediumship; accessing other realms of reality; dying before dying; sacred oneness with everything; and access to knowledge of past, present, and future. By employing intention, attention, and rhythmic

coordinated behavior in a shared physical space while consuming a common plant-based entheogenic sacrament, practitioners produce an altered state of consciousness which may provide access to non-ordinary knowledge and healing. The research presented in this manuscript indicates a need for the scientific community to increase investigation of the entheogen ritual context and its therapeutic value for psychedelic interventions. There needs to be considerations for critical analysis on research philosophy, research framework, healing paradigms, and study designs focusing on ritual components, emergent mechanisms, and overall participant effects. For this to happen, any existing bias against the concepts of emergent mechanisms and their potential role in gnosis and healing needs to be acknowledged and overcome in the study design so that research into the discrete planes of reality can be rigorously explored.

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