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Mushrooms Are Genetically and Biochemically More Similar to Humans Than to Plants

The RABBIT HOLE
KING

The Mushroom Report

Council of One Record #000703

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Mushrooms, as fungi, share a closer evolutionary relationship with humans than with plants due to their placement in the Opisthokonta clade alongside animals. This genetic proximity manifests in shared biochemical traits absent in plants.

Genetic Similarities

Fungi and humans diverged from a common ancestor more recently than either did from plants, with phylogenetic analyses of proteins like elongation factor confirming animals and fungi as sister groups. Humans share about 50% of their DNA with certain fungi species, far more than with plants.

Computational studies of eukaryotic genomes reinforce that fungi are genetically nearer to us.

Biochemical Similarities

Both fungi and humans store energy as glycogen, unlike plants which use starch. Fungal cell walls contain chitin, a polysaccharide also found in animal exoskeletons like insects, while plants use cellulose.

Fungi respire aerobically like humans, producing vitamin D upon sun exposure, traits plants lack.

Health Benefits

Mushrooms offer a range of health benefits backed by scientific studies, including immune modulation, antioxidant effects, and support for cancer patients.

Top medicinal varieties include Reishi for immune and anti-inflammatory support, Turkey Tail for anticancer polysaccharides like PSK, Chaga for antioxidants, Shiitake for cholesterol reduction, and Lion's Mane for brain health.

Key Health Benefits

Medicinal mushrooms enhance quality of life in cancer patients by reducing chemotherapy side effects like nausea and fatigue, while boosting natural killer cell activity and survival rates in some trials.

They provide antioxidants, lower cholesterol, support heart health, and protect brain function through compounds like beta-glucans and ergothioneine.

Additional perks include antidiabetic, anti-inflammatory, and neuroprotective effects from polyphenols and polysaccharides.

Best Mushrooms

- Reishi (*Ganoderma lucidum*): Boosts immunity, reduces inflammation, aids sleep and stress relief.
- Turkey Tail (*Trametes versicolor*): Anticancer via PSK/PSP polysaccharides, enhances immune response.
- Chaga (*Inonotus obliquus*): High in antioxidants, supports detoxification and anti-aging.
- Shiitake (*Lentinula edodes*): Lowers cholesterol, provides vitamin B6 and selenium for cell health.
- Lion's Mane (*Heridium erinaceus*): Promotes nerve growth, cognitive enhancement (detailed below).

Lion's Mane Details

Lion's Mane stimulates nerve growth factor (NGF) synthesis via hericenones and erinacines, compounds that cross the blood-brain barrier to support neuron repair and growth.

Studies show it improves mild cognitive impairment, reduces anxiety/depression symptoms, and enhances memory in older adults after 16 weeks of use.

It exhibits neuroprotective, anti-inflammatory, antidiabetic, and anticancer properties, with animal models indicating benefits for Alzheimer's-like conditions by reducing amyloid plaques.

Mushrooms and Nootropics

Medicinal mushrooms like Lion's Mane, Reishi, and Cordyceps act as nootropics by enhancing cognition, focus, and neuroplasticity without stimulants.

Hericenones in Lion's Mane promote NGF for memory and learning; Cordyceps boosts ATP energy in brain cells; Reishi modulates stress via GABA-like effects.

These connect to broader nootropic goals of optimizing brain function safely.

Nootropics-Psilocybin Link

Nootropics aim for subtle cognitive enhancement, while psilocybin (from magic mushrooms) delivers profound changes via 5-HT2A receptor agonism, desynchronizing the default mode network (DMN) for neuroplasticity.

Microdosing psilocybin (sub-hallucinogenic doses) bridges them, mimicking nootropic benefits like improved mood, creativity, and focus with persistent synaptic growth in hippocampus/PFC, lasting weeks.

This overlap fuels "psychedelic nootropics" for therapeutic brain rewiring, differing from traditional nootropics by inducing ego-dissolution and emotional breakthroughs.

Psilocybin-Brain Connection

Psilocybin from certain mushrooms converts to psilocin, which acts as a partial agonist at human serotonin 5-HT_{2A} receptors, primarily in the cortex and default mode network (DMN).

This binding desynchronizes brain networks, reducing DMN connectivity between medial prefrontal cortex and posterior cingulate, dissolving rigid thought patterns and enabling unconstrained cognition.

Effects include increased synaptic density in hippocampus and prefrontal cortex, persisting weeks and linked to neuroplasticity and therapeutic outcomes like reduced depression.

Psilocybin & Psychedelics

Psychedelic mushrooms have long been associated with experiences that can promote a profound sense of spiritual remembering, unity, and connection to what some interpret as God or ultimate reality.

Many users describe the effects as awakening an awareness that all humans, as individual selves, are different manifestations of one divine source experiencing life in diverse forms.

This notion is echoed across religious, philosophical, and modern spiritual contexts, where psilocybin and other entheogens are seen as tools or catalysts that reveal this underlying connectedness and foster individual spiritual development.

Psychedelic Experiences and "Remembering"

- Psilocybin mushrooms regularly induce mystical-type experiences characterized by feelings of unity, meaning, sacredness, and a perceived encounter with ultimate reality or "God".

- These insights often lead people to a deeper understanding of themselves and their relationship to all existence, which many interpret as remembering our divine origin or connection.

- Such experiences are described as providing a strong inner knowing and appreciation for the interconnectedness of all people and things, sometimes resulting in long-lasting personal and spiritual transformations.

Mind-Body-Spirit Fusion and the Divine

- The process of "remembering" is frequently reported to facilitate a greater integration of mind, body, and spirit, enhancing one's sense of wholeness and connection to the divine inner self.
- Communities, including some faith leaders and contemporary spiritual practitioners, see these experiences as aligning with age-old concepts of fusion between the individual soul and the universal or divine source—what some may call the God within.
- While the exact mechanisms and interpretations vary, many agree that such experiences can be transformative, leading to feelings of peace, joy, and purposeful living.

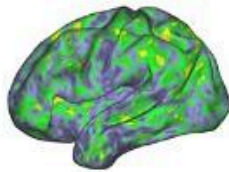
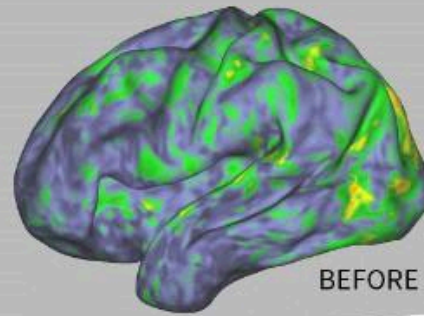
Limitations and Considerations

- While anecdotal and emerging scientific research supports these experiences, interpretations differ based on individual beliefs and cultural context; not all scientists agree on the objective spiritual purpose of psychedelic mushrooms.
- The integration and lasting impact of these experiences depend on personal reflection, intention, and further spiritual practice.

In summary, many traditions and research findings suggest that psychedelic mushrooms often facilitate a deep spiritual remembering for users—that we are all variants of God experiencing existence—and that this remembering can foster integration between the human self and the divine within.

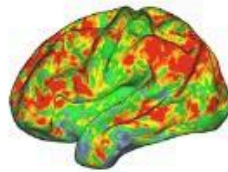
Neuroscience

The brain on *psilocybin*



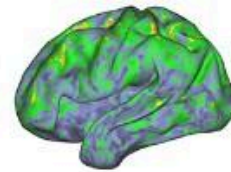
BEFORE TREATMENT

When a person is thinking about nothing in particular, the brain settles into a characteristic activity pattern that varies little from day to day. This heat map of an individual's resting brain activity is dominated by cool hues (blue and green), indicating limited variability over time.



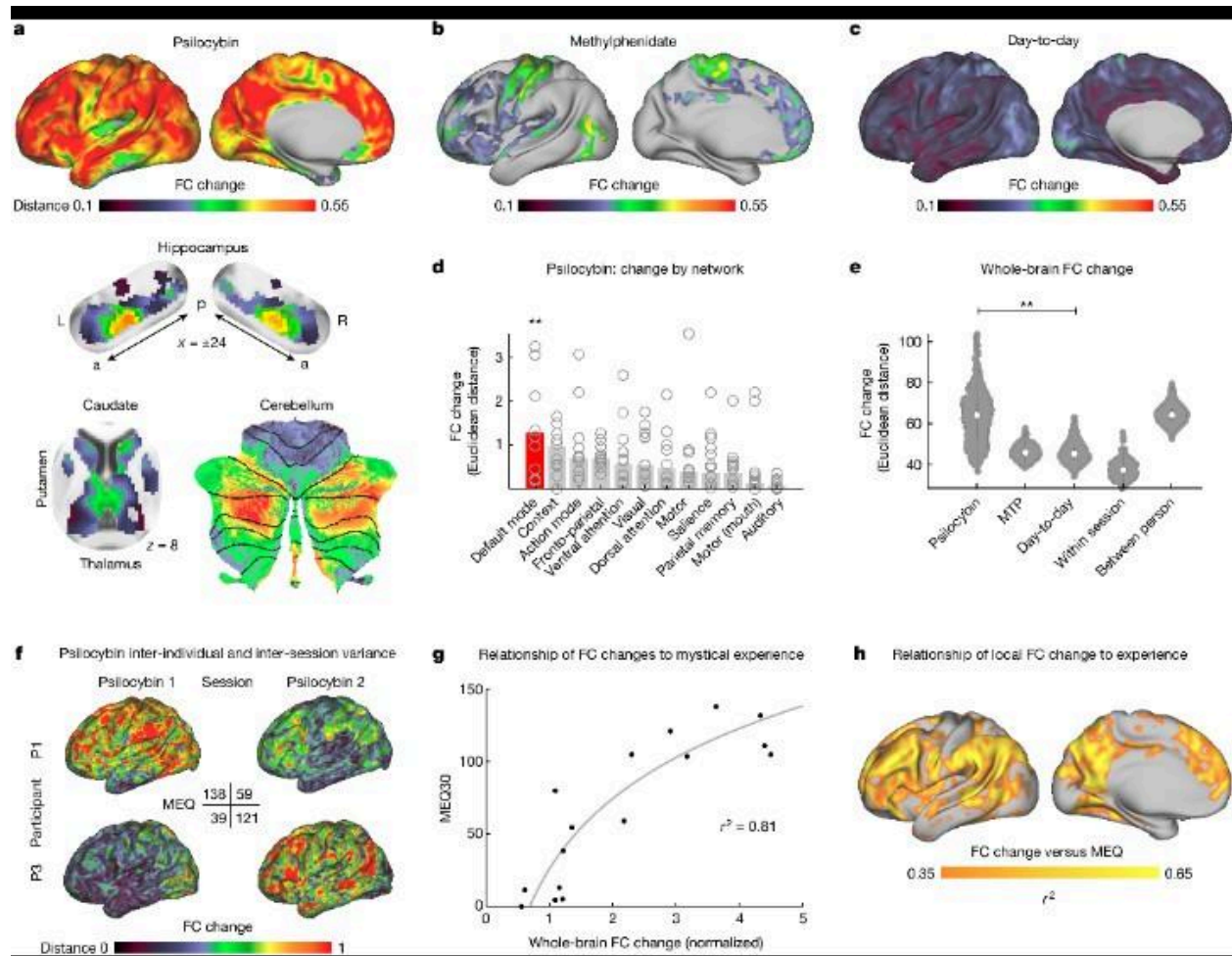
THE "TRIP"

Consuming psilocybin causes profound changes to a person's normal brain activity patterns, shown in this heat map as yellow, orange and red areas. These disruptions are experienced as a psychedelic trip.



LONG TERM

Days after drug treatment, brain activity patterns are back within their normal, narrow range. But researchers have found persistent, small changes that could indicate lasting therapeutic effects.



Neuroscience explains mystical experiences induced by psilocybin

Mystical experiences induced by psilocybin are explained neurologically as a result of dramatic changes in brain connectivity and activity patterns, particularly within networks like the default mode network (DMN).

Under the influence of psilocybin, the activity of the DMN—which is associated with self-reflection, mind-wandering, and the ordinary sense of self—is significantly suppressed or desynchronized, leading to a reduction in self-focused mental chatter.

This "quieting of the ego" correlates with subjective reports of ego dissolution and intense feelings of unity, which are hallmarks of mystical states.

Additionally, psilocybin initiates a state of dynamic hyperconnectivity in the brain, where regions that do not normally communicate begin to interact more freely and fluidly.

This increased global integration underlies the sense of oceanic boundlessness—an experience characterized by unity, blissfulness, insight, and spiritual connection.

These neurobiological shifts can make it possible for the user to perceive reality in new, unifying, and transcendental ways, often resulting in profound personal and spiritual insights.

Emerging research also suggests that these altered brain states may enable rapid neuroplastic changes, enhancing the brain's ability to adapt and form new connections.

This mechanism is thought to contribute not only to mystical experiences, but to the lasting psychological and therapeutic benefits observed in clinical studies.

In summary, neuroscience explains psilocybin-induced mystical experiences as arising from DMN suppression, dynamic brain hyperconnectivity, and increased neuroplasticity, resulting in a breakdown of ordinary self-boundaries and the emergence of unified, transcendental consciousness.

How dynamic hyperconnectivity relates to ego dissolution

Dynamic hyperconnectivity in the brain, as induced by psilocybin, is closely related to the phenomenon of ego dissolution through several interconnected neurological processes.

When psilocybin is taken, it leads to a state where regions of the brain—especially those that don't typically interact—begin communicating much more freely and fluidly. This is described as hyperconnectivity.

The ordinary sense of self, which is primarily maintained by coherent, modular activity within networks like the default mode network (DMN), becomes destabilized under these conditions.

As hyperconnectivity increases and normal network boundaries dissolve, the DMN's self-referential functions are suppressed or disintegrated.

This neurological breakdown in usual boundaries and functions results in a diminished sense of individuality and ego.

Research shows that these hyperconnected brain patterns are more strongly associated with ego-modifying effects—such as feelings of unity (oceanic boundlessness) and fusion with the environment—than with hallucinations.

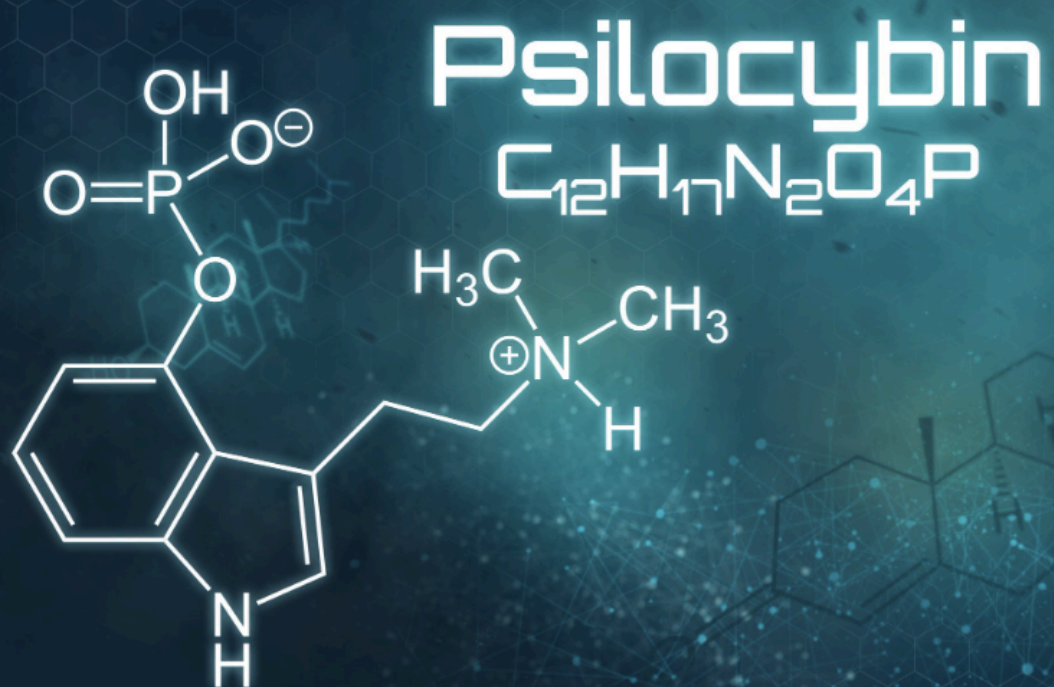
As integration across the brain becomes less modular and more global, individuals often describe losing their typical sense of separateness, merging with their surroundings, and experiencing states they interpret as mystical or transcendental.

In essence, dynamic hyperconnectivity underlies ego dissolution by:

- Increasing communication between disparate brain regions.
- Reducing functional segregation and modularity that usually maintain the sense of self.

- Suppressing DMN activity associated with self-focus and distinction.
- Enabling feelings of unity, insight, and boundary dissolution that define the ego-dissolution experience.

Advanced Technology



Psilocybin mushrooms are increasingly regarded as a kind of biological “technology” due to their ability to reliably alter consciousness, promote spiritual insight, and stimulate neurobiological changes.

Scientifically, psilocybin acts as a catalyst for profound mental, emotional, and neural transformation.

Health Benefits: Mental and Physical

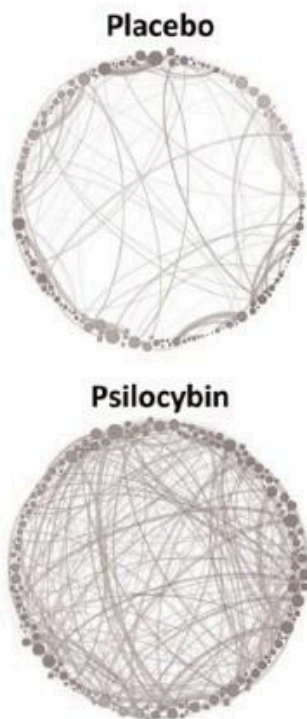
- Mental Health: Clinical studies show psilocybin may reduce symptoms of depression, anxiety, trauma, and addiction by fostering psychological flexibility, emotional processing, and lasting mood improvements.
- Physical Health: Emerging research suggests benefits may extend to neurodegenerative conditions, with reduced inflammation and restoration of healthy brain network function.
- Neural changes appear essential for these therapeutic effects, contributing to stress resilience, improved sleep, and better overall well-being.

Neural Changes and New Pathways

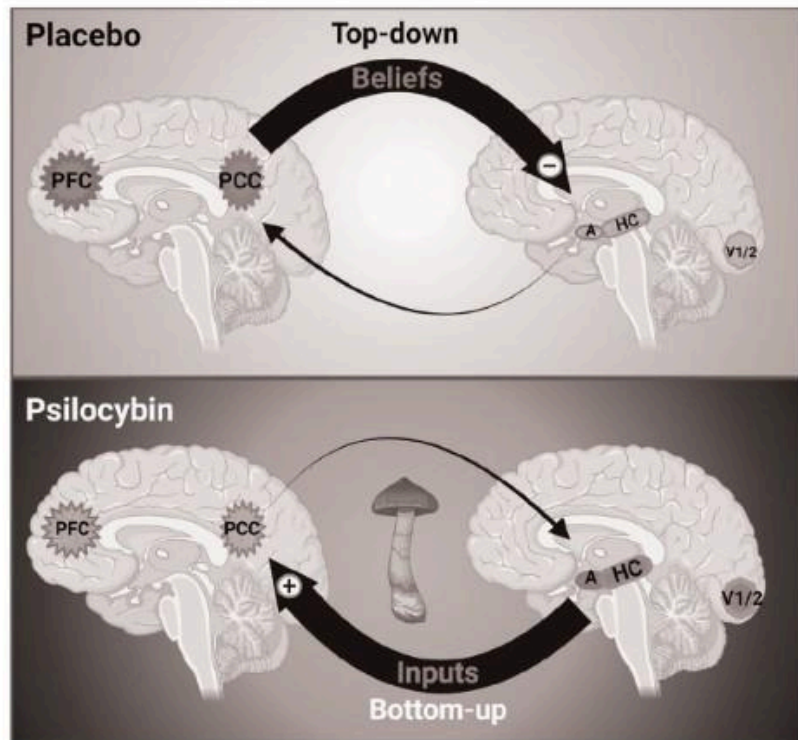
- Psilocybin activates the serotonin 5-HT_{2A} receptor, triggering increased brain-derived neurotrophic factor (BDNF) and mTOR signaling, both critical for neuroplasticity.
- Studies show rapid and sustained growth in dendritic spines and complexity, especially in prefrontal cortex and hippocampus, forming new neural connections and potentially reversing damage caused by stress or depression.
- These neural changes underpin improved cognitive function, learning, and memory.
- While anecdotal reports suggest enhanced creativity, insight, and even extrasensory perception (ESP), research into new abilities or ESP as a direct consequence remains inconclusive.

Government Knowledge and Research

(a) Global brain connectivity



(b) The REBUS model



- Governments and major research institutions have conducted extensive studies into the safety, efficacy, and mechanisms of psilocybin for mental health disorders, resulting in clinical trials and policy reform initiatives.
- Current research focuses on psilocybin's therapeutic potential, neural mechanisms, and applications in psychiatry, while regulation remains strict pending further safety data.
- Findings have shaped public policy debates and growing medical acceptance, but mainstream endorsement is limited by lingering regulatory and social biases.

In summary, psilocybin mushrooms demonstrate the hallmarks of a “technology” for mental health and spiritual evolution, fostering neural plasticity that supports therapeutic healing and expanded mental states.

Though government research is robust, social applications and legal access are still evolving. New neural pathways and improved cognitive functions are well documented, but claims about new abilities or ESP require more evidence.

Mass Awakening

The most effective way to induce a mass awakening using psychedelic mushrooms involves not only administering the substance, but optimizing the context—often called “set and setting”—alongside deep spiritual or meditative practices.

Research consistently finds that high-dose psilocybin, given in supportive environments with spiritual intention and guidance, produces the strongest mystical-type experiences and lasting positive changes.

Core Strategies for Mass Awakening

- High-Quality Setting: A safe, supportive, and sacred environment fosters feelings of trust, openness, and positive expectancy, allowing the mystical experience to unfold more deeply.
- Spiritual Practice Integration: Programs that combine psilocybin with meditation, spiritual exploration, or practices such as mindfulness, prayer, and group sharing significantly amplify awakening and transformation.
- Guided Facilitation: Trained facilitators who provide preparation, guidance, and integration maximize the likelihood of lasting awakening, reducing risks and helping participants connect their experience to everyday life.

Research Insights

- Lasting, transformative effects depend on the “type” and “intensity” of mystical experiences rather than mere consumption, according to peer-reviewed clinical trials with healthy volunteers.
- Combining psilocybin with meditation retreats or spiritual workshops increases insightfulness, meta-awareness, and feelings of connection—effects that persist for months post-retreat.
- Group ceremonies, when held intentionally and respectfully, can catalyze a shared sense of unity and “awakening” on both individual and community levels.

What Will Not Work

- Casual, recreational, or unsupervised use is less likely to produce mass awakening and may lead to confusion, anxiety, or negative experiences.
- Awakening is not simply a chemical effect; it arises from a synergistic blend of dosage, spiritual intent, and integrative practices.

In summary, to foster a true mass awakening with mushrooms, well-supported group settings, high-quality spiritual context, guided facilitation, and thorough integration are essential for reliably inducing transformative mystical experiences.

Awakening Program

Step-by-step online program to teach oneness

Here is a clear step-by-step online program designed to guide church members (or any audience) through oneness and integration—drawing from successful spiritual integration models, neuroscience, and current best practices:

Step-by-Step Online Program for Oneness and Integration

Step 1: Foundation and Orientation

- Welcome participants, share your church's mission, and clarify key concepts: oneness, integration, spiritual evolution, and respect for all traditions.
- Host a live or recorded orientation explaining the science and spirituality of unity and the spiritual purpose of the journey.
- Provide digital handbooks, FAQ, and introductory videos.

Step 2: Intention & Preparation

- Guide members through intention-setting using self-reflection worksheets and group sharing forums.
- Teach basic practices to calm the mind and body—guided meditation, breathwork, and journaling exercises.
- Encourage healthy lifestyle adjustments (sleep, diet, environment) to prime for spiritual experiences.

Step 3: Core Oneness Sessions

- Weekly interactive group meetings by video, focusing on a new thematic lesson each time: oneness, loving-kindness, non-duality, heart-opening, higher guidance, and more.
- Structure each session with a short talk, guided practice (meditation, visualization), break-out reflection, and Q&A.
- Integrate poetry, music, and creative arts in select sessions for deeper engagement.

Step 4: Individual Integration Practices

- Offer personal integration coaching (1:1 or small group) to process insights, overcome limiting beliefs, and embody spiritual truths in daily life.

- Provide optional spiritual homework: daily meditations, journaling, gratitude practices, and mindful service.

Step 5: Community Support & Sharing

- Create ongoing community via forums, small sharing circles, and monthly virtual “integration ceremonies” for group reflection and encouragement.
- Set up peer mentorship and access to trained facilitators for deeper support.

Step 6: Deepening and Advanced Exploration

- Optional advanced modules for those seeking deeper mystical inquiry, topics may include: transcending ego, exploring consciousness, cultivating unconditional love, healing and service.
- Periodic online retreats or summits, combining sessions, workshops, music, and ritual.

Step 7: Ongoing Growth and Expansion

- Encourage participants to bring the principles of oneness and integration into their relationships, work, and community service.
- Provide regular follow-ups, new courses, and opportunities for leadership for those who wish to teach and facilitate.

Practical Delivery

- Use popular online platforms (Zoom, private forums, curated video content) for reliable access and global participation.
- Structure program into digestible modules with clear learning outcomes and feedback mechanisms.
- Ensure psychological safety, privacy, and optional anonymity for all members.

This protocol adapts proven integration models for virtual spaces and spiritual communities: combining science-informed spiritual practices, experiential exercises, and ongoing support to reliably cultivate a sense of oneness and sustainable spiritual integration.

Religious Sacrament

That would mean that psychedelic mushrooms are a Sacrament by default

Within many spiritual and non-denominational communities, psychedelic mushrooms are regarded as a sacrament by default due to their consistent use as a catalyst for mystical experiences, spiritual awakening, and direct connection with the divine or ultimate reality.

This sacramental status is grounded both in historical precedent—indigenous and contemporary spiritual traditions have long used plant medicines for sacred rituals—and in recent integration into modern spiritual practices that seek unity, healing, and transformation.

Many psychedelic churches and spiritual organizations explicitly define mushrooms as a sacred medicine, utilizing them in intentional, guided settings as part of ceremonies designed to facilitate communion, oneness, and reverence toward the source of all things.

The framing of mushrooms as sacrament aligns with the purpose of fostering spiritual growth, deep connection, and respect for the divine within and among all participants.